



Under the Big Apple: a Retrospective of Preservation Practice and the New York City Subway System

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UNDER THE BIG APPLE:
A RETROSPECTIVE OF PRESERVATION PRACTICE AND THE NEW YORK
CITY SUBWAY SYSTEM

A Thesis
Presented to the Faculty of the Graduate School
of Cornell University
In Partial Fulfillment of the Requirements for the Degree of
Master of Arts

by
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August 2010

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ABSTRACT

The New York City Subway system is one of the most iconic, most extensive, and most influential train networks in America. In operation for over 100 years, this engineering marvel dictated development patterns in upper Manhattan, Brooklyn, and the Bronx. The interior station designs of the different lines chronicle the changing architectural fashion of the aboveground world from the turn of the century through the 1940s. Many prominent architects have designed the stations over the years, including the earliest stations by Heins and LaFarge. However, the conversation about preservation surrounding the historic resource has only begun in earnest in the past twenty years. It is the system's very heritage that creates its preservation controversies.

After World War II, the rapid transit system suffered from several decades of neglect and deferred maintenance as ridership fell and violent crime rose. At the height of the subway's degradation in 1979, the decision to celebrate the seventy-fifth anniversary of the opening of the subway with a local landmark designation was unusual. Narrowly scoped, the local designation protected just 12 stations out of hundreds, but introduced the Metropolitan Transit Authority (MTA) and the New York City Transit Authority (NYCTA) to the idea that preservation was an option rather than wholesale redesign of the stations during its modernization campaign, begun in the late 1960s. Twenty-five years later for the centennial of the subway, the local landmarks designation was followed up with a broader National Register nomination. Today 12 stations are locally designated while around 50 are individually listed on both the State and National Registers of Historic Places.

In the years since the local designation, a preservation ethic has begun to be developed at NYCTA. The first real step towards incorporating preservation into

regular station planning was introduced in the Station Planning & Design Guidelines in 1992. Additional programs for the sensitive treatment of historic stations have been included in capital projects and a resource database has been created for the NYCTA design staff so that projects that have preservation concerns can be immediately identified. The difficulty is balancing preservation issues with the dynamic quality of a mass transit system which has high safety, security, and consumer demands placed on it. A small preservation staff at NYCTA is attempting to find solutions to these problems and make sure that the legal requirements of the preservation designations are fulfilled.

This thesis offers a retrospective and analysis of preservation practice in the New York City subway system. Through a series of case studies, the application of NYCTA's developing preservation ethic is examined by highlighting different aspects of preservation in the system. The case studies also locate areas of improvement for the stewardship of the stations. The goal of this research is to provide a history and critique of preservation practice within the New York City subway system.

BIOGRAPHICAL SKETCH

Emma Waterloo was born in Pittsburgh, Pennsylvania in August of 1986. She spent her youth growing up in the small town of Mercer, Pennsylvania before leaving to attend Marywood University in 2004 for art education. Disliking her major, Emma transferred to the University of Pittsburgh in 2005 to finish her undergraduate studies.

While at Pitt, Emma studied architectural history with an emphasis on the Italian Renaissance. After finishing an architectural studio course, she decided against going to graduate school for architecture and instead, with the advice of department chair Drew Armstrong, chose to pursue graduate work in historic preservation. Emma completed her undergraduate thesis on architectural drawings in the high renaissance under the direction of Franklin Toker. Graduating with university and departmental honors in addition to the Faculty of Frick Fine Arts Special Commendation Award, she holds a Bachelor of Arts in architectural studies.

Emma began her coursework at Cornell University in the fall of 2008. During the summer of 2009 she interned with the New York City Landmarks Preservation Commission and the Neighborhood Preservation Center. A recipient of the Barclay Jones Thesis Research Grant, Emma will be graduated from Cornell in August 2010 with a Master of Arts in historic preservation planning.

ACKNOWLEDGMENTS

This thesis would not have been completed without the support from many people. First and foremost, I am grateful to my family for their love, questions, care packages, articles, and telephone calls which helped me to persevere when I wanted to quit. And to my other family, the HPP Class of 2010: Stephanie Smith, Bryan McCracken, Grant Johnson, Nathaniel Guest, and Nurit Shir; I have learned so much from you all. Thank you for your friendship and your advice.

Thank you to my professors, Michael Tomlan and Jeff Chusid, for helping me navigate the murky waters of the thesis process. Your dedication to your students is the shoulders this program stands on.

I am indebted to the great professionals from a multitude of organizations for their wealth of information and candidness. From the New York SHPO: Beth Cumming, Kathy Howe, and Pete Shaffer; from NYCTA: Hollie Wells, Sara McIrror, and Judith Kunoff; the Transit Museum staff; Greg Donofrio; and Marjorie Pearson.

Finally, I would like to express gratitude toward HPPA, Inc and their constant support of the HPP program. This research has been funded in part by a Barclay Jones Thesis/Dissertation Research Grant from Historic Preservation Planning Alumni, Inc.

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INTRODUCTION

On August 17, 2009, morning passengers on the 1 train under Broadway in Manhattan headed towards the Bronx encountered an annoyance not unusual for recent summer service on the New York subway system. At the 168th Street station, passengers had to board a shuttle bus to the Dyckman Avenue station where rail service resumed. Unlike most instances where straphangers have to transfer to aboveground transit due to construction, the disruption on that Monday morning was due to a little “incident” the night before: a 25 foot section of bricks facing the ceiling of the 181st Street station fell 35 feet on to the tracks (Figure 1). Luckily, no one was injured during the collapse and subway service resumed the following week. The station itself was able to reopen to the public by the end of August.¹

Built over a century ago, the 181st Station was part of the original Interborough Rapid Transit (IRT) under Contract No.1, which heralded the new rapid transit age in New York City. The station, formed much like a cavern, is one of the deepest stations in the entire rapid transit system, at a depth of 121 feet below the street level.² This engineering feat, overseen by prominent Columbia-trained engineer Barclay Parsons, gains additional importance from the fact that its interior was designed by Beaux-Arts master architects Hines and LaFarge. Their design remains largely intact even though the station has gone through several remodeling and extension campaigns. All together, the cohesiveness of design, the advancements in engineering, and the impacts of rapid transit on the greater community of northern Manhattan and the

¹ Michael M Grynbaum, “Service on the No.1 Subway Line is Largely Restored,” *New York Times*, August 24 2009, <http://cityroom.blogs.nytimes.com/2009/08/24/service-on-no-1-subway-line-is-largely-restored/> (accessed January 12, 2010).

² United States Department of the Interior, National Park Service, “National Register of Historic Places Registration Form: 181st Street Subway Station,” NPS Form 10-900, December 18, 2004, <http://www.oprhp.state.ny.us/hpimaging/> (accessed January 12, 2010). 9.

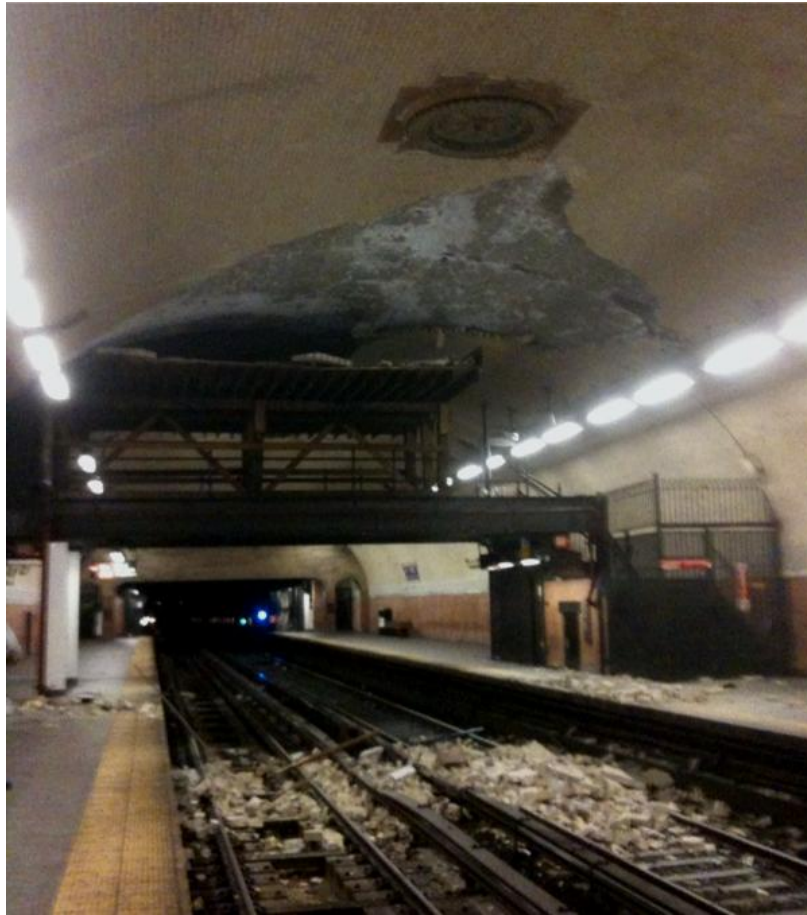


Figure 1: Collapse of the 181st Street Station on August 17, 2009. From MTA NYCTA.

Bronx made the station eligible for listing on both the National and State Registers of Historic Places.³ However, it is not covered under local landmark protection.

The August collapse of the 181st Street station did not come without warning. Community groups had raised flags over the condition of the station, and in 2007 the bricks from the ceiling were known to not be structurally sound. Scaffolding was put up to protect pedestrians but repairs seem to have been postponed due to lack of funding.⁴ In recent years, the New York City Transit Authority (NYCTA), a subsidiary of the Metropolitan Transit Authority (MTA), has had to juggle

³ Ibid, 9-18.

⁴ Jim Dwyer, "Subway Station Ceilings were Built to Last, but Not Forever," *New York Times*, August 19, 2009, New York edition.

maintenance for the aging system with demands for expansion amid budget cuts from the city and the decreasing value of the dollar, among other problems. The whole financial affair was brought under public scrutiny when MTA announced sweeping service cuts and fare hikes to close a \$1.2 billion budget gap, which would have gone through had the state government not stepped in with a bailout plan earlier in 2009. As rider advocate Andrew Albert put it, “This is not cutting fat, this is cutting well into the bone.”⁵ So naturally, expensive maintenance and preservation issues take the back seat to larger operating problems. So what was learned in 2007 was that the 101-year-old ceiling was failing, and two years later, it had collapsed.⁶

As America’s most comprehensive train network, the New York City subway system has captured the imagination of visitors for over one hundred years. Its iconic, grimy stations instantly announce the location as New York City and have set the stage for a myriad of movies, songs, and novels. For many tourists, a trip to New York is not complete without a ride on one of the tangled subway lines. The transit system is essential for city residents to make their way to work, providing justification for New York to continue adding to its skyline. The subway is a predictable entity in a constantly evolving city.

With over 840 total miles of track and some 468 stations,⁷ New York’s metro subway system is a formidable operation; it is one of the few high-volume rapid transit systems not in a capital city, and of those it stands alone as the only one in operation 24 hours a day, seven days a week.^{8,9} This heavily-used system, indispensable to many

⁵ William Neuman, “MTA Votes to Raise Fares and Cut Service,” *New York Times*, March 26, 2009, New York edition.

⁶ The current situation of the 181st Street Station is described in Appendix A.

⁷ New York State Office of the State Comptroller, “A Guide for Evaluating the Metropolitan Transportation Authority’s Proposed Capital Program from 2000 to 2004,” September 1999, <http://www.osc.state.ny.us/osdc/rpt700/rpt700.htm> (accessed September 27 2009).

⁸ Al Baker and Richard Perez-Pena, “With Terrorism Concerns in Mind, Police Prepare to Guard a Shuttered System,” *The New York Times*, December 20, 2005, New York edition.

⁹ This does not include certain portions of Chicago’s “El” which also runs 24 hours a day, but it does not have a comparable ridership population.

New Yorkers, was nearly stalled on the drawing board by a volatile mix of corrupt politics and greed. Describing how the subway system was cobbled into existence presents a challenge for scholars. In some ways, the history of the subway system is the history of New York.

Even though the subway system is over a century old, the preservation conversation has only begun in the past twenty years. The dialogue started after much historic fabric was lost to insensitive station rehabilitation and modernization projects begun in the late 1960s as NYCTA struggled to upgrade the deteriorated system to modern standards. Beginning most notably with the Station Planning and Design Guidelines of 1992, NYCTA has made strides towards being a better steward of its historic resources. A three person staff at NYCTA works within the limitations of the Transit Authority to meet the legal standards of preservation as described by the local and nation preservation designations. This thesis presents a retrospective of preservation practice in the New York City subway system over the past twenty years and provides an analysis of its success.

Research for this thesis included personal interviews with members of the Metropolitan Transit Authority, the New York State Historic Preservation Office, former members of the Landmarks Preservation Commission (LPC), and other professionals. The information on specific case studies from their files at the New York SHPO was invaluable. Cornell University's library system provided texts on the development and history of the subway system as well as copies of the MTA Annual Reports and Capital Campaigns. Also important were the designation reports filed with the LPC and the National Register, both available online.

Chapter 1 provides the background and historical context for the development and construction of the New York City subway system. Chapter 2 explores station design and identification throughout the construction periods of the mass transit

system, and how the underground ornamentation reflects the changing architectural fashions from aboveground. Chapter 3 focuses on the different preservation designations of individual subway stations and how each came about. Chapter 4 explains how the preservation designations are supposed to work and how they actually operate in the field. Additionally, Chapter 4 examines the history of preservation and preservation funding at MTA. Chapter 5 discusses the primary challenges to preservation issues in the system. Chapter 6 details past preservation projects and their successes and challenges. Each case study was selected to highlight a different aspect of preservation in New York City, such as how preservation is treated in Manhattan versus the outer boroughs, elevated versus underground stations, stations with multiple designations as opposed to just singular designations, and what happens to closed historic stations. The conclusion evaluates this 20-year retrospective and provides suggestions for how preservation may be handled more effectively in the future.

CHAPTER 1

BUILDING THE SUBWAYS

In the nineteenth century, the United States was experiencing a population explosion as waves of immigrants from around the globe arrived in port cities along the coasts in order to establish a better life. Many immigrants found themselves entering the country through New York City, and made their way through the crowded, busy streets of the city proper. The city had grown to prominence as a port after the opening of the Erie Canal in 1825.¹⁰ To further underscore the sheer numbers of immigrants, between 1850 and 1860, New York's¹¹ population doubled in size and hit over a million people, shown in Figure 2. These people were living largely in slums in poorly constructed and ventilated tenement housing. Nearly all of the development occurred below Canal Street; only the fashionable neighborhoods expanded north towards other villages on the island.¹² Many tenements had sweatshops tucked into their various floors, and communal kitchens and sanitation facilities afforded little protection against disease outbreaks, a threat to public health and safety.¹³

Around the time of the Civil War, housing reformers and businessmen finally took notice of the nightmarish conditions in the tenements. Tenement housing was cheap and typically consisted of a five-story walk-up covering ninety percent of the lot with four apartments per floor. Only one room in the apartment would have access to a window.¹⁴ Through various exhibitions on the living conditions of the tenements, in

¹⁰ Hood, 30.

¹¹ At this time, New York City consisted only of the Island of Manhattan.

¹² Ibid, 36.

¹³ Peter Derrick, *Tunneling to the Future: the story of the great subway expansion that saved New York*. (New York: New York University Press, 2001). 9.

¹⁴ Ibid, 17.

Table 1
Population of Greater New York by Borough,
1790–1997 (in Thousands)

| | <i>Manhattan</i> | <i>Bronx</i> | <i>Brooklyn</i> | <i>Queens</i> | <i>Staten Island</i> | <i>Total^a</i> |
|-------------------|------------------|--------------|-----------------|---------------|----------------------|--------------------------|
| 1790 ^b | 33 | 2 | 5 | 6 | 4 | 49 |
| 1800 | 61 | 2 | 6 | 7 | 5 | 79 |
| 1810 | 96 | 2 | 8 | 7 | 5 | 120 |
| 1820 | 124 | 3 | 11 | 8 | 6 | 152 |
| 1830 | 203 | 3 | 21 | 9 | 7 | 242 |
| 1840 | 331 | 5 | 48 | 14 | 11 | 391 |
| 1850 | 516 | 8 | 139 | 19 | 15 | 696 |
| 1860 | 814 | 24 | 279 | 33 | 25 | 1,175 |
| 1870 | 942 | 37 | 420 | 45 | 33 | 1,478 |
| 1880 | 1,165 | 52 | 599 | 57 | 39 | 1,912 |
| 1890 | 1,441 | 89 | 839 | 87 | 52 | 2,507 |
| 1900 | 1,850 | 201 | 1,167 | 153 | 67 | 3,437 |
| 1910 | 2,332 | 431 | 1,634 | 284 | 86 | 4,767 |
| 1920 | 2,284 | 732 | 2,018 | 469 | 117 | 5,620 |
| 1930 | 1,867 | 1,265 | 2,560 | 1,079 | 158 | 6,930 |
| 1940 | 1,890 | 1,395 | 2,698 | 1,298 | 174 | 7,455 |
| 1950 | 1,960 | 1,451 | 2,738 | 1,551 | 192 | 7,892 |
| 1960 | 1,698 | 1,424 | 2,627 | 1,810 | 222 | 7,782 |
| 1970 | 1,539 | 1,472 | 2,602 | 1,987 | 295 | 7,896 |
| 1980 | 1,428 | 1,169 | 2,231 | 1,891 | 352 | 7,071 |
| 1990 | 1,488 | 1,204 | 2,301 | 1,952 | 379 | 7,323 |
| 1997 ^c | 1,536 | 1,188 | 2,240 | 1,976 | 402 | 7,343 |

^a Totals may not add due to rounding.

^b Greater New York was not formed until 1898.

Figure 2: Population expansion in New York City. Note the years between 1850 and 1860 where the population size grew substantially. New York then lost nearly a million of its population between 1970 and 1980. From Peter Derrick's work, *Tunneling to the Future*, page 10.

1867 reformers were able to pass legislation enabling building codes for all new tenements, requiring “adequate” light and ventilation for each housing unit. However, this legislation did not completely solve the problem. The awareness of the terrible living conditions in the tenement was finally brought to a head with Jacob Riis’s still-famous book from 1890, *How the Other Half Lives*.

What the housing reformers really thought would help more than any regulations on tenement construction would be to provide a way for residents to not live in such high densities close to their jobs, in newer housing with modern amenities. Rapid transit, as exemplified by London’s subway system, which opened in 1863, provided one solution for making this idea a reality.¹⁵

The wealthy elites of the city also saw the benefit of dissipating the crowded population, if only from the perspective of personal safety. As Peter Derrick writes in his published dissertation on the subway system, “The disease, crime, alcoholism, and perceived general lack of morality in the poor districts could, it was feared, spill over into the ‘decent’ neighborhoods if something was not done to reduce overcrowding in the slums.”¹⁶ The upper classes were the ones who were able to take advantage of the omnibus system already in place, being the only population with disposable income to pay the fare, and were systematically moving north on the island of Manhattan, shifting the fashionable neighborhoods away from the industrial and market zones. They saw the overcrowded tenements as a breeding ground for vice and disease, a sure-fire way of branding the new and very poor immigrants as “others.”

City officials, too, grasped at opportunities that would arise if the crowded population was dispersed from the tenement houses. The downtown was so crowded that delivery wagons could barely maneuver the streets. As Stanley L. Fischler writes

¹⁵ Ibid, 21.

¹⁶ Ibid, 9-11.

in his overview of the history of mass transit, “It was evident as early as 1862 that the city’s hopelessly snarled traffic had to find some form of relief.”¹⁷ The traffic clogging the streets was making it difficult for the city to operate. Additionally there were concerns that to escape the congestion, the working classes would seek housing across the river in New Jersey or in Brooklyn, still an independent city at that time. The idea was that immigrants who had been in New York longer would be starting to pull themselves out of poverty, and if housing outside the tenements was made available in the vast tracks of land in northern Manhattan and the Bronx, there was a chance that these immigrants would jump at the opportunity to move into new housing and stay in the city.¹⁸ This would bring the city increased revenue through property taxes and would socially assimilate the immigrants quicker. Installing a rapid transit system was one way the city could encourage this development.

An affordable mass transit system, seemingly the best solution, now had to be designed, engineered, and won politically. London was proving that underground trains could be the answer, as long as the tracks were well ventilated and the underground passages kept as short as possible because the trains were still powered by coal. But getting the same sort of system in New York was going to be difficult. The tunnels had to be built under existing public streets, meaning that approval of one or more levels of government, in this case state and/or local, was required.¹⁹ Permission would be one of the biggest obstacles to the system because it required the approval of the corrupt Democratic machine being run out of Tammany Hall, lead by the infamous Boss Tweed, which was funded in part by bribes exacted from the

¹⁷ Stanley L Fischler. *Moving Millions: an inside look at mass transit*, (New York: Harper & Row, 1979). 37.

¹⁸ Hood, 25.

¹⁹ Derrick, 23-24.

streetcar industry.²⁰ Street cars, in addition to slow-moving and unsightly elevated rail lines, had been the only transportation available to New Yorkers as the city expanded.

The surface modes of transportation felt threatened by a rapid transit system, so Boss Tweed effectively blocked every bill introduced to construct one. For example, Hugh B. Willson, who had been in London during the construction of that subway system, was the first to attempt to build a subway in New York, proposing plans to the New York State legislature in 1864, 1865, and 1866. The bill was not even brought up for vote in 1864, was vetoed by the governor in 1865. A different bill for the construction of an experimental elevated line passed in 1866 while everyone was focused on proposals for a subway system.²¹

Out of all of the failed proposals for constructing a subway system in New York, and there were many, two stand out. One was by a certain Mister Alfred Ely Beach in 1868. Beach, editor and partial owner of the journal, *Scientific American*, was enamored with the field then called “pneumatic research.”²² Through his professional acquaintances, Beach had heard about the trials of a London-based company using pneumatic tubes to quickly send mail using air pressure under the streets of the city. By enlarging this system to accommodate human passengers, Beach was convinced that he had the answer to New York’s rapid transit quandaries.²³

Beach’s proposal was denied time and again in state legislature by those politicians devoted to Tweed. In retaliation, Beach started his own line in secret by passing the bill for construction through the legislature under the guise of two small “dispatch lines” meant to be used for packages, not people. Once he got permission

²⁰ Ibid, 27.

²¹ Ibid, 23-24.

²² Oliver E Allen, “New York’s Secret Subway,” *American Heritage of Invention & Technology* 12, no. 3 (1997): 46.

²³ Ibid, 47.

for the dispatch lines, he quietly asked for an amendment to his charter to combine the lines under the pretext to decrease construction costs, which was granted.²⁴

Mr. Beach bought property on the corner of Broadway and Murray Street near City Hall and began excavating a lobby and tunnel out of the basement. Dirt was smuggled out in small amounts as a digging shield pushed a tunnel under Broadway. When his elaborately decorated station was complete (Figure 3), he invited the very first guests to come for a demonstration. A large fan, a contraption dubbed the Great Aeolor,²⁵ was used to push and pull the cylindrical cars down the tracks and back. The officials in attendance proclaimed it would be a big success, but Tweed shut it down and stopped Beach from acquiring the permission to expand.²⁶ The forgotten line was rediscovered in 1912 when workers digging for the expansion of a Broadway line broke through the wall of the sealed tunnel, finding everything including a car and the digging shield intact (Figure 4).

The other noteworthy subway proposal was put forth on January 31, 1888 by New York Mayor Abram S. Hewitt, a wealthy iron manufacturer and son-in-law of Peter Cooper.²⁷ His proposal connected technology to a business-government relationship. Hewitt called for government ownership of a privately constructed and operated system. This won approval from the powerful Chamber of Commerce, which then was able to pass legislation in the form of the Rapid Transit Act of 1894. The Act outlined that the city government should be responsible for investment while the Board of Rapid Transit Railroad Commissioners, backed by the Chamber of Commerce, undertook the planning of the system. The rights to build and operate the

²⁴ Ibid, 47.

²⁵ Ibid, 48.

²⁶ Derrick, 27.

²⁷ Hood, 13.

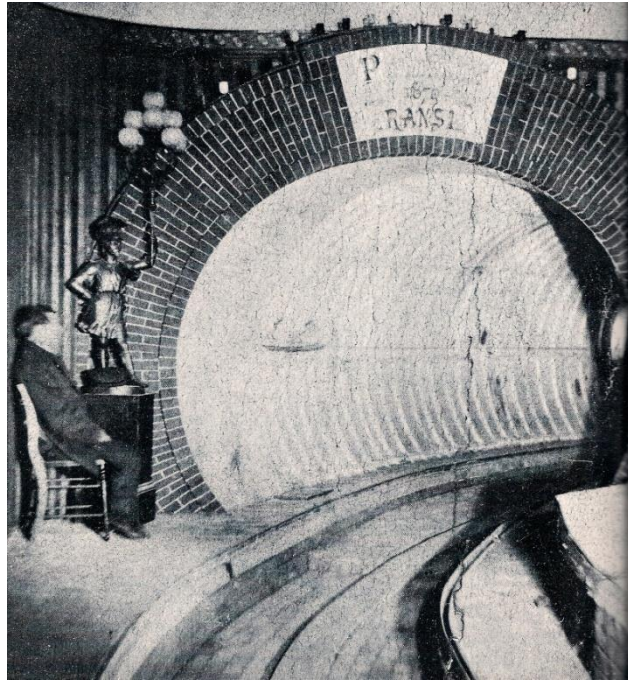


Figure 3: Station and tunnel of Beach's experimental pneumatic subway line. From the New York Historical Society.

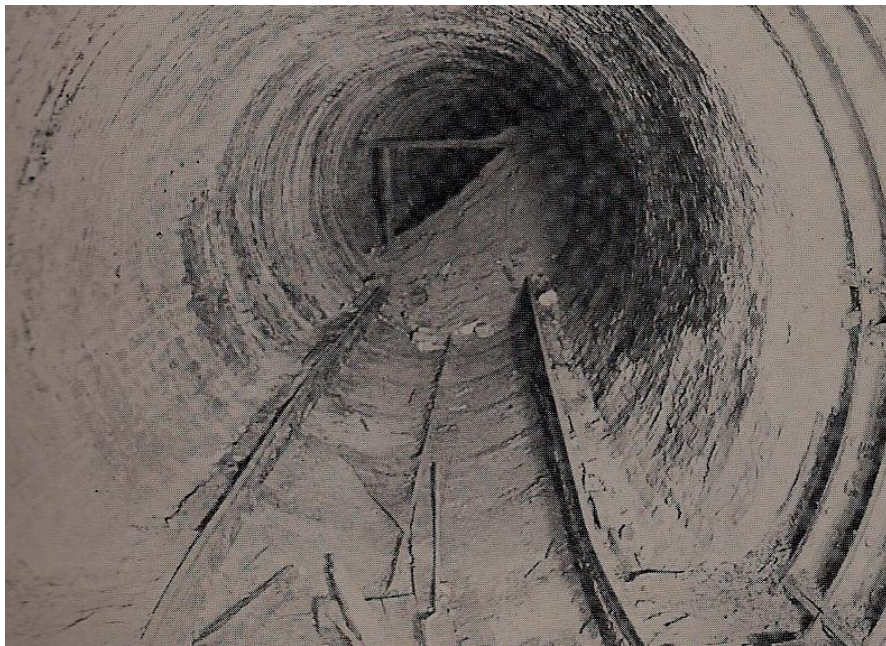


Figure 4: The discovery of Beach's tunnel in 1912. Taken from *Under the Sidewalks of New York* by Brian Cudhay, page 9.

the system would be available in a public sale. The new Rapid Transit Board (RTB) was able to take first real steps towards building a rapid transit system for New York.²⁸

Contract 1

During the nearly forty years following the first attempts to pass legislation authorizing a subway, New York's population had continued to climb. Developments in the railroad industry, such as the success of electricity replacing coal as a power source, helped to make the idea of building an underground train more palatable to those in public office. Also, the RTB was proving to be more successful at planning potential subway routes than any other individual or previous study commission. The comprehensive routes helped to give the plan traction with public opinion.²⁹

To deal with the complicated Manhattan geology, the RTB appointed William Barclay Parsons, a Columbia graduate and future co-founder of the prominent engineering firm Parsons Brinkerhoff, as their chief engineer.³⁰ With the engineer and routes in place, the convoluted task of sending the project out to bid was begun. Mr. August Belmont stepped forward, with financing from contractor John McDonald, to sign Contract No. 1, which allowed for the construction of a subway on the island of Manhattan. Ground was broken on March 24, 1900.³¹ Two years later, Belmont founded the Interborough Rapid Transit Company (IRT) to operate the system once construction was completed.³² Specifications for subway construction were finally agreed-upon with the creation of the IRT.

²⁸ Derrick, 36.

²⁹ Hood, 13.

³⁰ Ibid, 77.

³¹ Derrick, 40.

³² Ibid, 41.

Contract No.1 covered the first 21 miles of the rapid transit system. The route started at City Hall and proceeded north to Grand Central Terminal, hung a sharp left and continued under 42nd Street to Broadway. It then followed Broadway north to 96th Street, where the line branched before entering the Bronx. One branch continued under Broadway, terminating at the Harlem Ship Canal while the other branch cut northeast under Central Park before splitting again. These branches ended at 145th Street and at 180th Street next to the Bronx Zoo (Figure 5). Five stations were express, spaced one and a half miles apart, while the other forty-five constituted local stops.³³ The express trains, running approximately 30 mph, helped to cover the 21 mile length quickly, while the local trains, going approximately 15 mph, gave riders easy access to the system every few blocks.³⁴ The IRT opened the line to the public on October 27, 1904, with many details left to complete. Mayor George B. McClellan switched on the motor for the first tour of the line and guided the rolling stock north from City Hall. The fare was a nickel.³⁵

Contract 2

As the first Contract was being drawn up for the system in Manhattan, the citizens of Brooklyn were demanding rapid transit across the East River. In May of 1900, public hearings began to plan a subway route through Brooklyn. An approved route was adopted by the RTB on January 21, 1901 that ran the subway from the Battery on Manhattan, under the East River, and eventually connected to the Long Island Railroad Station on Atlantic Avenue in Brooklyn. Three bids were received,

³³ Lee Stookey, *Subway Ceramics: a history and iconography of mosaic and bas relief signs and plaques in the New York City subway system with photographs by the author*, (Brooklyn: L. Stookey, 1992). 9.

³⁴ M. G. Cunniff, "The New York Subway," *The World's Work: a history of our time*, (New York: Doubleday, Page & Company, 1904), vol. 8. 5347.

³⁵ Derrick, 24.

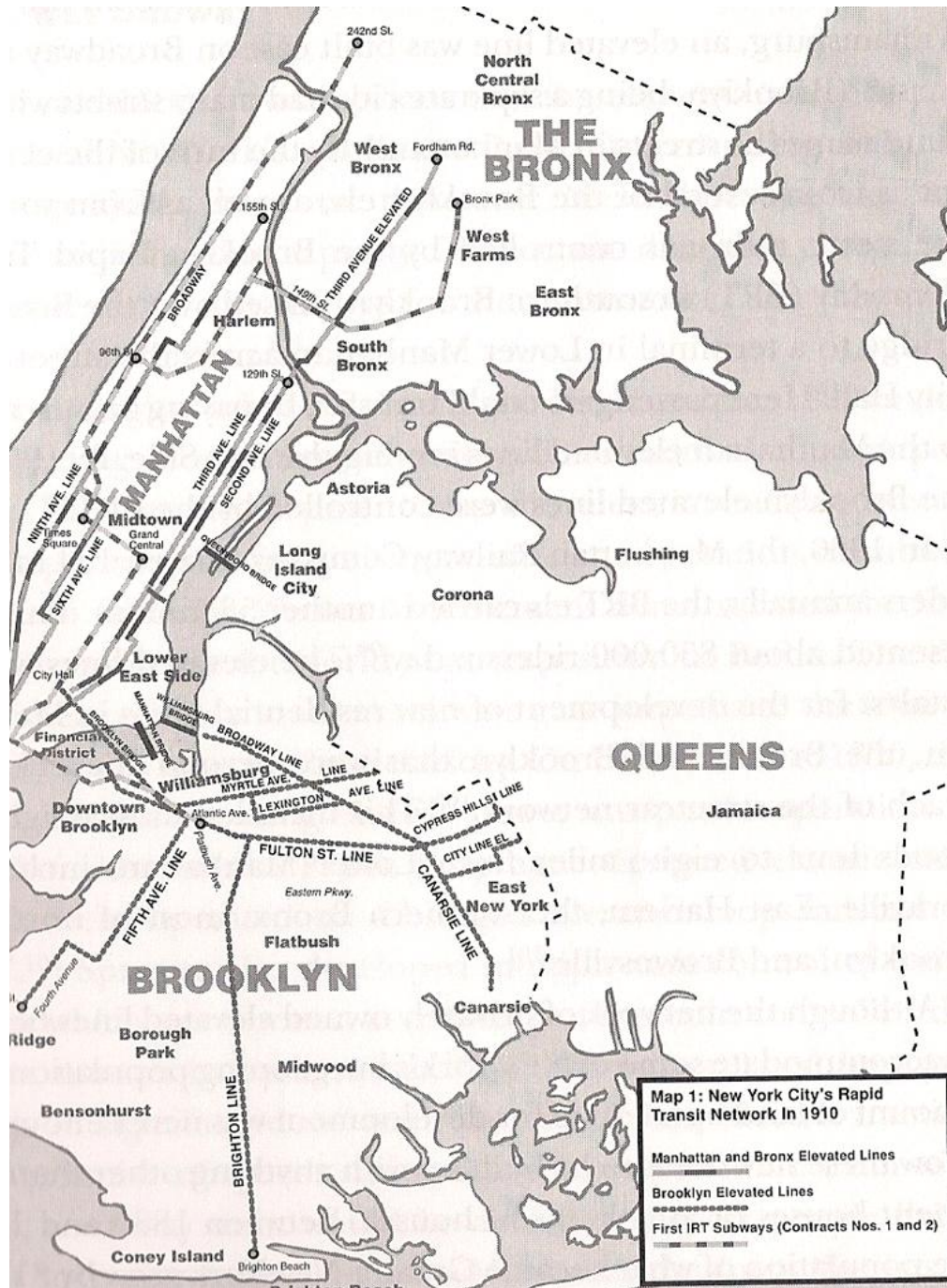


Figure 5: Map of rail lines in New York in 1910. Note the route of the first subway system. From *Tunneling to the Future*, page 31.

including one from John McDonald representing IRT and one from the Brooklyn Rapid Transit Company (BRT), who already operated the elevated lines in Brooklyn. The IRT underbid the BRT by \$5 million in anticipation of high profits from the route between downtown Brooklyn and southern Manhattan. The city awarded the bid to the IRT.³⁶

Construction began in 1902 with the provision to provide transfers between the IRT's elevated and subway lines.³⁷ This extension of the original line opened in stages: from City Hall to South Ferry in 1905, to Brooklyn's Borough Hall in early 1908, and was officially completed in May of that year. At the same time, in the summer of 1907, political oversight of the subway system changed hands from the city-controlled RTB to the more powerful state-sponsored Public Service Commission (PSC).³⁸

The lines were immediately successful and filled the pockets of the IRT management with huge profits, especially from what were termed "short-haul" fares from passengers using the subway within downtown Manhattan or from Manhattan to downtown Brooklyn. The New York State legislature had ruled that all transit fares be limited to five cents, which had once been too high for the general public but was now seen as a reasonable charge. The only draw-back was that the amount of land opened for residential development was relatively small. In order for the private sector to build the trains and tunnels, there had to be the sure reward of big profits. Profits did not come from sparsely inhabited land, so instead of opening more land for residential neighborhoods, the trains ran primarily through already populated areas except for a few locations in northern Manhattan and parts of the Bronx.³⁹

³⁶ Derrick, 42.

³⁷ The IRT signed a lease in 1902 with the Manhattan Railway Company to operate the elevated lines in Manhattan as well as the subway.

³⁸ Stookey, 10.

³⁹ Derrick, 45.

Underdeveloped areas quickly built up because of the demand for housing. Large, speculative apartment buildings were put up through the 1910s along the subway line as seen in the Washington Heights neighborhood. Speculative luxury apartment buildings also went up in the village of Harlem along the Lexington Avenue line. In Harlem so many buildings were put up so quickly, and vacancy rates soared. The apartments began to be subdivided and some building owners and managers started renting to African-Americans. This eventually led to Harlem becoming known as the center of African-American culture in New York. New tenements, built in compliance with the new laws on construction, also sprang up in the Bronx, giving the lower-middle and working class families an alternative to Lower Manhattan. So many families jumped at the opportunity to escape the crowded Lower East Side, reformers worried that the crowding would soon be repeated in the Bronx.⁴⁰

Contracts 3 and 4

The need for additional rapid transit service was recognized before the lines under Contracts Nos. 1 and 2 opened, and the crowded subway trains further confirmed the need. Yet the IRT did not want to give up its monopoly and refused to let the BRT expand into Manhattan. The public-private partnership that was instrumental to getting the first subways built was deadlocked, with IRT staunchly unwilling to risk any of its company profits to competition. It was during these negotiations with the city that the RTB was replaced in 1907 by Public Service Commission (PSC), placing the regulatory planning at the state rather than the local level. Several failed attempts at planning more routes continued the stalemate, including one called the Triborough System which pieced together routes in the Bronx, connecting them with the Battery down the eastern side of Manhattan. The

⁴⁰ Ibid.

Fourth Avenue subway would connect to this new trunk line at Canal Street before continuing out to Brooklyn.⁴¹ The Triborough System completely neglected Queens. A compromise was reached in 1911 which allowed for the expansion of both the IRT and BRT systems, the debt of both to be paid off by the 1920s by the five cent fare.⁴²

The complete Dual System, as it was called, consisted of two additional Contracts signed in 1913. Contract No. 3 was awarded to IRT and was designed to “complete the H” in Manhattan from Contract No. 1 by extending south down 7th Avenue from Times Square and north up Lexington Avenue from Grand Central. The Contract also provided for an additional line that ran from Times Square to Grand Central and eventually ended in Flushing. This Contract was mostly completed by 1920, although the subway did not arrive in Flushing until 1928. Contract No. 4 was awarded to the BRT, which due to bankruptcy reorganized as the Brooklyn Manhattan Transit Corporation (BMT).⁴³

The plan called for additional lines between Manhattan and Queens and integrated the subway with the elevated rail lines. The IRT had already built the earliest portions of the subway with the same narrow gauge used in the elevated lines. When the BMT was able to build subway lines, the company decided to run everything on the railroad industry Standard gauge. Today, all the lines have been converted to Standard gauge. However, the tunnels built under the first contracts are too narrow to accommodate the large rolling stock used throughout the rest of the system, and require separate, smaller cars.⁴⁴ The picture of the subway after the Dual System begins to show the form of the subway recognized today, shown in Figure 6.

⁴¹ Ibid, 65.

⁴² Ibid, 173-185.

⁴³ Stookey, 11.

⁴⁴ Parsons Brinckerhoff, et al, *Phase I: Reconnaissance Level Survey of Transit Authority Properties: Task 1 Report- Field Survey Findings*, (June 1991: Report to MTA NYCTA). Appendix C.

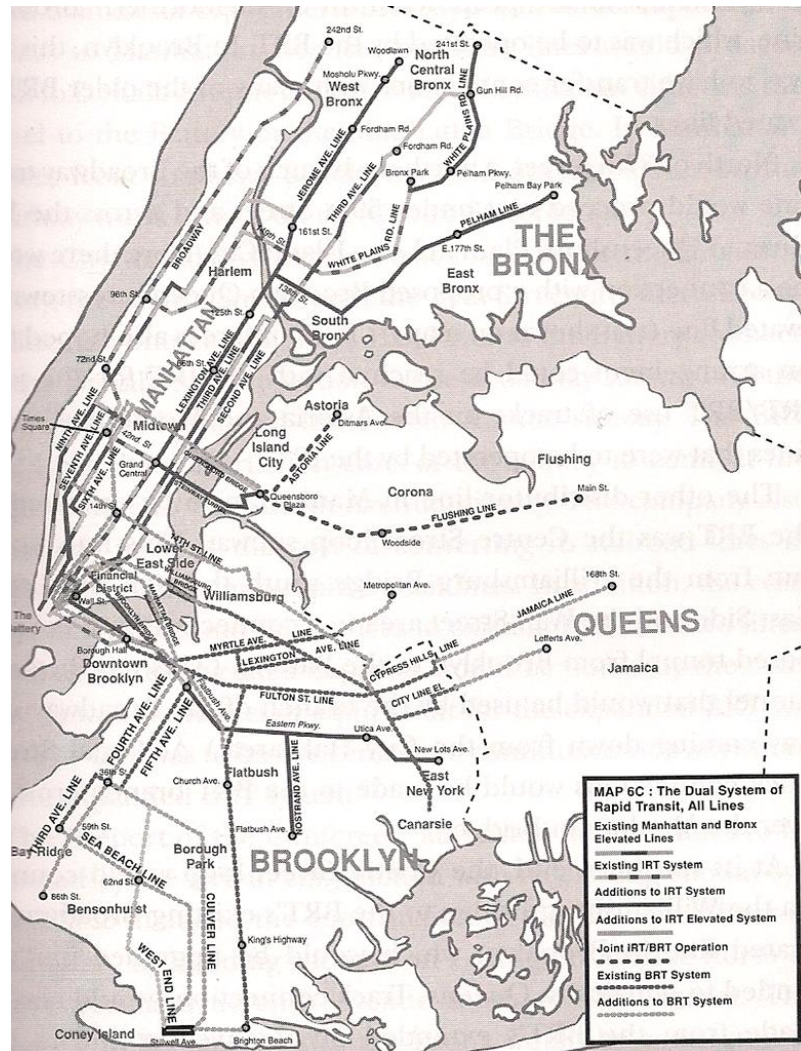


Figure 6: Map of the Dual System. From *Tunneling to the Future*, page 177.

The Independent Line

The final piece of the subway puzzle was put into place in 1924 when the New York City Board of Transportation (BOT) decided after a heated debate to build and operate an Independent System (IND) which opened between 1932 and 1940.⁴⁵ This essentially comprises the modern system seen today. Additional routes, needed along the eastern side of Manhattan in addition to supplements to the Brooklyn-Queens

⁴⁵ Derrick, 236.

Crosstown line, were not immediately added after the instant popularity of the opening of the IND. No one could have predicted the inflation associated with the Great Depression which spun construction debt for the subways out of control, or the city's insistence, under the direction of Mayor Hylan, on a five cent fare long after the need to raise the price became obvious.

The IND lines gave the subway system its current shape and form. It consisted of the Eighth Avenue line, which runs north-south in Manhattan under Eighth Avenue and complements the Broadway line as well as extending to the Grand Concourse line in the Bronx; the Queens Boulevard line; the Fulton Street line and Prospect Park line in Brooklyn; and finally the Brooklyn-Queens cross-town line.

Making the System One

Due to inflating construction and operating costs thanks to a World War and a Great Depression ravaging the country's economy, all of the careful market and budget studies conducted by the companies to justify subway construction were rendered obsolete, and suddenly the transit companies were in jeopardy. To cover expenses, the companies desperately needed to raise fares from the five cent law laid down by the New York State legislature. As most decisions regarding the subway, the political fight at the local level raged intensely during the 1920s, with even the mayor denying the companies the opportunity to raise the fare.⁴⁶

With the fare locked at five cents, the IRT went into receivership in 1932. In 1940, Mayor LaGuardia worked to allow the city of New York to take control of its subways. When the city finally managed to purchase all the subways, they were run by the local New York City BOT. The reasoning was that by having one integrated system, the entire workings of the subways would be able to be streamlined and

⁴⁶ Derrick, 235.

overseen by one authority, keeping the cost of transfers down and transforming the system into a civic good.⁴⁷

The subways were no longer self-sufficient, even after all the lines were consolidated. Responding to the rise of the automobile after World War II, New York sank nearly all its transportation funds into the construction of Robert Moses's expressways, nearly abandoning the rapid transit system.^{48,49} Because of the financial duress of the city-controlled system, prominent Republican Paul Windels was able to wrench control of the subways away from the city and set up the state Transit Authority in 1953, which is credited as beginning the utter deterioration of the subways during the 1970s.

This Transit Authority was taken over by the Metropolitan Commuter Transportation Authority (MCTA), chartered by the state of New York, which afterwards changed its name to the current Metropolitan Transit Authority (MTA), on March 1, 1968.⁵⁰ On this date, MTA officially assumed control of the New York City Transit Authority (NYCTA)⁵¹, the Manhattan and Bronx Surface Transportation Operating Authority (MABSTOA), the Long Island Rail Road (LIRR), and all properties of the Triborough Bridge & Tunnel Authority, making it one of the largest transit organizations in the world. Plans for new subway lines were drawn up in the 1970s and 1980s, but were dropped due to lack of funds. It was not until the recently continued construction began in 2008 for the Second Avenue line that the door for much needed new subways had been reopened.⁵²

⁴⁷ Hood, 219-231.

⁴⁸ Between 1950 and 1953, New York City spent \$1.72 million on highways, amounting to 88 new miles of road, but not a single mile of new track was added.

⁴⁹ Ibid, 202.

⁵⁰ Ibid, 16.

⁵¹ NYCTA is still used to describe the branch of MTA that governs specifically the subway system.

⁵² This is only a brief sketch of the story of the construction of New York's subway system. For a more complete tale of the entire ordeal, see Clifton Hood's traditional history in *722 Miles* or Peter Derrek's more sensitive, socio-economic approach in *Tunneling to the Future*.

CHAPTER 2

STATION DESIGN

During the four decades it took to build New York's subway system, architectural taste changed dramatically. Society, which had been in the Edwardian era during the planning and initial construction for Contracts Nos. 1 and 2, had turned towards the simplicity of the Arts and Crafts movement before fully embracing the Machine Age and a more economical, mass-produced aesthetic. Likewise, the floral and classical decorative motifs of the Beaux-Arts Style at the turn of the century gave way to the hand-crafted playfulness of the Arts and Crafts movement which in turn was overtaken by the celebration of modern technology through the Moderne Styles.

Each of these periods in architecture coincided with a subway building campaign, and the architect(s) of each of the campaigns drew on the popular style of the time. The underground stations present a timeline of changing fashions. Stations built under Contracts Nos. 1 and 2, utilize ornamentation that appealed to a classical sense of design. The Dual System simplified the elaborate terracotta decoration of Contracts Nos. 1 and 2, utilizing mosaics with large geometric shapes depicting realistic scenes in fanciful colors. The design of the Independent line replaced mosaics with easily replicable, mass-produced tile in identifiable color schemes. The progression of designs remained virtually intact until the late 1960s when NYCTA began their more intensive station rehabilitation campaigns to upgrade the neglected transit system.

The intention behind the different subway styles was to orient travelers to their location within the city. Furthermore, the architects used color and imagery to help passengers quickly identify the stations. Even though the overall designs were distinct from building campaign to building campaign, all of the designs utilized a field of

white tile for the wall cladding, giving a sense of cohesiveness and continuity throughout the system.

Designing the First Stations

When the first serious negotiations for the construction of the subway system began, the RTB had an enormous challenge in front of them: the political debates were intense, the technology of the electric traction train was just being perfected, and the feasibility of hollowing out the infamously diverse Manhattan geology all took priority over concerns for the aesthetic appearance of the system. By 1891, however, the RTB had realized that enticing people below ground to travel through tunnels might be made easier if great pains were taken “to give brightness and cheerfulness” to the stations.⁵³ William Barclay Parsons, as Chief Engineer, also had some suggestions after he studied the other rapid transit systems already in existence around the world. He favored neither the purely utilitarian design of the London Underground, nor the extravagant Baroque design of the Berlin Stadtbahn.⁵⁴ The question of what was an appropriate aesthetic, along with the chore of selecting an architect, was delegated to three members of the RTB, Commissioners Rives, Smith, and Langdon.⁵⁵

American design sensibilities were being dazzled by the Beaux-Arts Style of the exhibit halls at the World’s Columbia Exhibition in Chicago in 1893. The influence in style came from the premiere architecture school at the time, the Ecole des Beaux-Arts in Paris, which was where most respectable architects of the 1890s trained. Americans who studied there brought back a taste for French Renaissance architecture as well as the notion for a new city aesthetic, later termed the “City

⁵³ *Report of the Board of Rapid Transit Railroad Commissioners*, (New York, 1891). 72.

⁵⁴ William Barclay Parsons, *Rapid Transit in Foreign Cities*, (New York, 1894). 9.

⁵⁵ David J. Framberger, *Architectural Designs for New York’s First Subway*, HAER NY-122, (New York: Historic American Engineering Record, 1979). 370.

Beautiful” Movement. The ideas were then put on display in Chicago at the most influential world’s fair America had ever seen. So when the commissioners went looking for an architect, it was quite clear what kind of architect they would choose for the large civic project.⁵⁶

Different architecture firms came up for consideration in 1901, among which were the prominent New York City, Ecole-trained duo of Carrere and Hastings and a more eclectic British-trained architect named Robert Gibson. Apparently, Carrere and Hastings demanded too large a fee for the city to fund and Commissioner Langdon voted down Gibson. Then in March of 1901, the New York firm of Heins and LaFarge was given the commission to design the stations on a meager annual fee. The men had been trained at the first architecture school in the United States, MIT, whose curriculum borrowed heavily from the Ecole course of study.⁵⁷ Heins and LaFarge had already begun to build a reputation in the city with prominent commissions including the buildings at the new Bronx Zoo and the grand Cathedral of St. John the Divine in the Upper West Side.⁵⁸ This cathedral commission probably brought the architects to the RTB’s attention; a part of the commission required a small chapel for Augustus Belmont, president of the IRT.⁵⁹

Heins and LaFarge then had to set out to tackle a design problem unlike any they had worked on to date. The engineers had already created the space and platforms, so that the architects were merely required to act as decorators. Parameters had already been laid out by the RTB requiring that the stations use “white or light-colored tiles, or enameled brick for the station walls, except where color was to be introduced for architectural effect.”⁶⁰

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ Stookey, 14.

⁵⁹ Framberger, 370.

⁶⁰ Ibid, 366.

Decorating Contract Nos. 1 and 2

With the commission's stipulations in mind, Heins and LaFarge selected durable materials, such as brick, marble, and glazed tiles, which could withstand the damp, heavy use, and cleaning.⁶¹ Typical subway designs, influenced and approved by Parsons, consisted of a concrete floor that lapped the walls by two inches so that there would be a "sanitary cove" to help with cleaning. The next two feet or so would be made of buff colored iron-spot Roman brick or pink-hued marble, forming a durable wainscoting. Above this, the majority of the wall would be clad in a field of white glass or ceramic tiles. The walls were divided into fifteen foot panels, corresponding to the spacing of the support columns, by pilasters of brick or marble. Just below the terra cotta cornice line, a mosaic band and faience plaques would announce the station name. The ceiling was to be articulated by jack arches accentuated with low-relief floral plaster work.⁶² The supports necessary for shoring up the ceiling were fashioned into round cast iron columns along the platform's edges (Figure 7). Platforms formed central islands for express stations or two outer platforms for local stations.⁶³

Each station was given its own identifying color scheme or faience symbol. The color schemes were employed in a multitude of decorative patterns including egg and dart, key and swastika, garlands, leaves, rosettes, cornucopias, scrolls, bells, and wreaths. "The choice of these traditional patterns and designs was perhaps part of a conscious effort by the architects to surround passengers with the familiar, hoping to ease their anxiety at being underground."⁶⁴ While this may have been the rationale put

⁶¹ Stookey, 15.

⁶² Framberger, 376.

⁶³ Ibid.

⁶⁴ Stookey, 15.



Figure 7: "Typical" Heins and LaFarge Station Design. 28th Street Station, circa 1917. From the Transit Museum.

forth for the patterns at the time, the designs also shows strong ties to Hines and LaFarge's other decorative work at the Bronx Zoo, where they used classical motifs and animal depictions for a simple decorative design.⁶⁵

Combined with patterning and color schemes, the architectural firm developed elaborate and distinctive images for some of the more highly trafficked stations. Hines and LaFarge's basic idea was to use art to convey information, a technique that has been around for centuries. Some scholars assert that the firm saw art as a solution to the challenge of providing new immigrants, who had rudimentary English skills, the ability to discern at which station on the line they were arriving.⁶⁶ Perhaps closer to the truth was that these ideas were influenced by early-twentieth-century nativist

⁶⁵ New York Landmarks Preservation Commission, *IRT Subway System Underground Interior...: Boroughs of Brooklyn and Manhattan: Completed 1904 (contract 1), 1908 (contract 2): Chief Engineer Samuel B. Parsons: Architects Heins & LaFarge*, (New York: The Commission, 1979). 4.

⁶⁶ Stookey, 15.

thought which emphasized assimilating immigrants to American culture as quickly as possible. Hines and LaFarge mined the city's history to link the intersections aboveground to the stations below. Readily-available examples include the beaver motif at Astor Place, recalling John Astor's fortune in beaver pelt trading,⁶⁷ or the large eagle at the 33rd Street Station, which symbolized the armory that used to stand at that intersection.⁶⁸

These faience plaques were produced by two prominent ceramics companies: Rookwood Pottery of Cincinnati provided the opaque terra cotta product for northern stations including 79th, 86th, and 91st Streets, and Grueby Faience Company out of Boston contributed the iconic works at Columbus Circle, Astor Place, and 33rd Street.⁶⁹ Many at the time argued that native New Yorkers would fail to make the connection between obscure history and the symbolic pictogram of the stations, but the images were easily identifiable and were quickly learned.

Arts & Crafts Influence over the Dual Contracts

The Dual Contract stations, built during the 1910s and 1920s, valued simplicity, clean lines, and a dedication to fine detailing that related to massing and form. As a reaction to Victorian opulence and the Industrial Revolution, the Arts and Crafts movement matured in America later than its European counter parts and stayed strong through the 1930s. These modern concepts were brought to the New York subway system by Squire J. Vickers, an upstate New York farm boy and graduate of the Cornell University architecture school.⁷⁰

⁶⁷ Ibid, 26.

⁶⁸ Ibid, 30.

⁶⁹ Ibid, 16.

⁷⁰ Ibid, 60.

After graduating in 1900, Vickers moved to New York City and worked in a private architecture firm before being hired by the RTB in 1906.⁷¹ He then took over most of the architectural responsibilities when Heins and LaFarge exited in 1907 and when the PSC took control of the subway system. When the Dual System contracts were signed, PSC's chief engineer, Alfred Craven, already had an experienced architect on staff. Vickers had a healthy respect for the past and the original design intent of Heins and LaFarge, but was determined to re-envision the design standards for the new contracts.⁷²

In Vickers' designs, tile work was set flush with the wall plane, in simple, smooth geometries. The intricate historically symbolic references were discarded in favor of realistic cityscape scenes in whimsical colors for station identification. Eliminating the artworks in relief and curvilinear ornamentation also increased the cleanliness of the stations, a concern of Vickers', by not giving dust any place to settle along the wall. Vickers retained the white field tiles that covered the walls from the older designs, but his terracotta tile work incorporated a broader color palette. The overall effect is cheerful and playful (Figure 8).⁷³

The IND's Design

The period of the IND contracts embraced yet another change in stylistic taste. The Arts and Crafts movement had given way to Art Deco and Art Moderne, which celebrated the future of modern industry with machine-age forms, materials, and mass production. The Machine Age saw the design of the physical subway space change as well as the decoration. Platforms, mezzanines, and concourses were wider, giving more room to the waiting crowds as the system adjusted to higher traffic volumes.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid, 61.



Figure 8: Typical Vickers Arts and Crafts station design. 14th Street/ Union Square. Photo by author.

Vickers was more than capable of making the transition in stylistic preferences in his station designs. Selected to design this last major round of construction, Vickers stripped the stations of nearly all of their former ornamentation. Economics dictated that the color be reduced to “long strips of colored tile along the wall,”⁷⁴ usually right under the height of where the cornice line used to be placed. Gone were the familiar three-by-six inch white field tiles on the walls, replaced by square four-by-four inch ones (Figure 9). Elaborate faience name plates were replaced by simple black tiles with white lettering that fit into the grid created by the new field

⁷⁴ New York Transit Museum, *Subway Style: 100 Years of Architecture & Design in the New City Subway*, (New York: Stewart, Tabori, and Chang, 2004). 13.



Figure 9: "Typical" station design by Vickers for the Machine Age.
Lower level, 14th Street/ Union Square. Photo by author.

| COLOR CHART OF STATIONS ON INDEPENDENT LINES | | | | |
|---|-----------------------------------|--|--------------------------------|----------------------------|
| RT. 105 • 207 th ST | RT. 109 • JAY ST. BOROUGHS HALL | RT. 103 • BROADWAY - LAFAYETTE ST | RT. 108 • QUEENS PLAZA | RT. 110 • LAFAYETTE AV |
| JYCKMAN ST. 209 th ST | * BERGEN ST. | * SECOND AVE. | 36 th ST. | CLINTON WASHINGTON AV |
| RT. 107 • 180 th ST - OVERLOOK TERRACE | * CARROLL ST. | DELANCEY ST. | STEINWAY ST. | * FRANKLIN AV |
| 181 st ST. | SMITH ST. 4 th AVE. | E. BROADWAY | 46 th ST. | * NOSTRAND AV |
| 175 th ST. | * 7 th AVE | YORK ST. | NORTHERN BLVD. | KINGSTON-THROOP AVE |
| * 160 th ST-BROADWAY MEDICAL CENTER | 13 th ST-PROSPECT PARK | | 65 th ST. | * UTICA AVE. |
| 163 th ST-AMSTERDAM | FT. HAMILTON PARKWAY | RT. 106 • 155 th ST-8 th AVE | * ROOSEVELT AVE. | RALPH AV. |
| 155 th ST. | * CHURCH AVE. | 161 st ST-RT. 106 | ELMHURST AVE. | ROCKAWAY AV. |
| * 145 th ST. | RT. 107 • COURT ST. | 167 th ST. | GRAND AV - NEWTOWN | * BROADWAY - EAST NEW YORK |
| 135 th ST. | * HOYT-SCHERMEHORN ST. | 170 th ST. | WOODHAVEN BLVD. SLATTERY PLAZA | LIBERTY AV. |
| * 125 th ST. | FULTON ST. | 174 th -175 th STS | 63 rd DRIVE | VAN SICKEN AV. |
| 116 th ST. | CLINTON WASHINGTON AV | * TREMONT AVE. | 67 th AVE. | SHEPHERD AV. |
| 110 th ST CATH. PKY. | CLASSON AV. | 182 nd -183 rd STS | * CONTINENTAL AV. FOREST HILLS | * EUCLID AV. |
| 103 rd ST. | BEDFORD-NOSTRAND AV. | * FORDHAM RD. | 75 th AVE. | GRANT AV. |
| 96 th ST. | MYRTLE-KILLOUGHBY AV. | * KINGSBRIDGE RD. | * UNION TURNPIKE KEW GARDENS | |
| 86 th ST. | FLUSHING AV. | * BEDFORD PARK BLVD. | VAN WYCK BLVD. | |
| 81 st ST. PLUS OFFICE | BROADWAY | 205 th ST. | SUTPHIN BLVD. | |
| 72 nd ST. | METROPOLITAN AVE. GRAND STREET | | PARKSONS BLVD. | |
| RT. 102 • 59 th ST-COL. CIR. | NASSAU AVE. | | 169 th STREET | |
| 50 th ST. | GREENPOINT AVE. | | 179 th STREET | |
| * 42 nd ST. | VAN ALST-21 st ST. | | | |
| * 34 th ST PENN. STA. | COURT SQ. | | | |
| 23 rd ST. | | | | |
| * 14 th ST. | | | | |
| RT. 101 • WEST 4 th ST. WASHINGTON SQ. | RT. 104 LEXINGTON AVE. | | | |
| * SPRING ST. | 5 th AVE. | | | |
| * CANAL ST. HOLLAND TUNNEL | * 7 th AVE. | | | |
| * CHARLERS ST. HUDSON TER. | | | | |
| BROADWAY-NASSAU ST. | RT. 101 50 th ST. | | | |
| HIGH ST-BROOKLYN BRIDGE | * 42 nd ST. | | | |
| RT. 45 FULTON ST. | * 34 th ST. | | | |
| BROAD ST. | 23 rd ST. | | | |
| * EIGHTH AVE. | 14 th ST. | | | |

Figure 10: Color chart of the station of the Independent Lines. From *Subway Style: 100 Years of Architecture & Design in the New City Subway*, page 51.

tiles. Station identification came down to the color schemes depicted in Figure 10. Use of color groups was linked to geographical location within the city; express stations carried a wider band of color while local stations had a slimmer band.⁷⁵

Each building campaign of the subway system was meant to have its own distinct design scheme, and each design is important to the period in which it was built. Therefore, the distinctions between the contracts in terms of decoration are character-defining features of the system, and should be considered during both maintenance and preservation projects.

⁷⁵ Ibid, 30.

CHAPTER 3

PRESERVATION DESIGNATIONS

The subway system had a profound impact on New York City. How this important resource came to be recognized as historically significant is no less dramatic. It took the city 75 years from the subway's official opening in 1904, to formally acknowledge it as an engineering, architectural, and planning marvel. All the while, the subway system was crumbling away as neglect, disinvestment, and crime took over the meticulously decorated stations. It took a handful of creative people at the young Landmarks Preservation Commission to see past the grime for a well-deserved local preservation designation for a few of the original stations.

After the local designation, another twenty-five years of historically insensitive maintenance practices removed much of the historic character from the system even as NYCTA introduced more preservation-minded Design Guidelines for rehabilitating stations. With the centennial of the system, the opportunity arose to designate much more of the mass transportation system on the national level. The National Register designation of New York's subways incorporated and expanded on the local designation, looking at the subway as an entire historic transportation network. These two designations, spaced apart by two and a half decades, demonstrate the evolution of preservation thinking and the differences between preservation designations on the local and national levels.

LPC Designation

By the time that the 75th anniversary of the opening of the subway system rolled around, the subway system reflected the city it served and was in dire shape. Aboveground, the 1970s were among the worst decades for crime in the city. The

economy was slogging through another cyclical period of crisis, and capping off the problems was a 25-hour-long blackout during the summer of 1977, resulting in widespread looting and civil unrest. Many in the middle class could not ignore the seemingly irreversible downward spiral of Gotham. New York lost nearly a million people to the suburbs by the decade's close, a number which the city has only recently recovered (Figure 2).⁷⁶

Underground, the subway entered the decade in dismal straights. Deferred maintenance and disinvestment had taken its toll. The cycle of disinvestment had been in place for decades. The rolling stock was filthy and old; original rolling stock had only just been removed from service from the elevated lines during the 1950s.⁷⁷ Stations were in disrepair, covered in graffiti, and locations of violent crime during evening hours. Violent crime continued to escalate through the 1970s to the point where transit police were having a difficult time ensuring the safety of passengers underground. For example, in 1979 there were 16 murders, 30 reported rapes, over 4,000 robberies and some 682 assaults.⁷⁸ The unreliable service seemed the least of the problems.

In light of everything, the fact that the subway had made it to its Jubilee Year was enough for Kent Barwick, chairman of the Landmarks Preservation Commission, to propose the designation of the system. At the time, Barwick had a reputation for being open to unusual landmark designations, and for the relatively recently established Commission, this was an extremely unusual designation. Not only were the stations in a state of disrepair, but they would be technically designating the

⁷⁶ George J. Lankevich, *New York City: a short history*. (New York: New York University Press, 2002). 208-224.

⁷⁷ Ibid, xiii.

⁷⁸ "THE CITY; Crime on Subways up 17% Last Year," *New York Times*, January 30, 1981, <http://www.nytimes.com/1981/01/30/nyregion/the-city-crime-on-subways-up-17-last-year.html?scp=8&sq=subway%20crime%201979&st=cse> (accessed June 2, 2010).

interiors of the stations, something that is infrequently controlled under preservation ordinances. Barwick had many meetings with MTA officials to persuade them of the designation. At the time, MTA through NYCTA had just launched a station rehabilitation program, and transit officials were afraid that landmark designation would slow down their modernization campaign. In the end Barwick proved successful.⁷⁹

On October 23rd, 1979, LPC was able to officially confirm the designation of portions of twelve of the original Hines and LaFarge designed stations from the earliest two contracts as well as the control house at 72nd Street and at Avenue H in Brooklyn. The designation was welcomed by a small contingent of subway enthusiasts and only the usual small amount of detractors, but largely as an oddity. The idea of designating a public infrastructure system, especially one in as deplorable condition as New York's, left many who knew about it scratching their heads. The stations from Contract One showcased examples of both local and express station designs. As a general rule, local platforms originally had 200-foot-long platforms south of 96th Street and 350-foot-long platforms north of 96th Street. The platforms were located between the tracks and the station walls. Express stations had an island platform between the local and express tracks and were also 350 feet long north of 96th Street.⁸⁰

From the point of view of the LPC Research Department, writing the nomination report was difficult work because the researchers had to specifically identify and describe the station's historic features to be designated as well as outline the parameters of the landmarked site.⁸¹ The previous year, NYCTA had undertaken a

⁷⁹ Marjorie Pearson (former Director of Research at the Landmarks Preservation Commission), telephone interview with author, March 18, 2010.

⁸⁰ New York Landmarks Preservation Commission, 4-5.

⁸¹ Pearson, interview.

Historic Structures Report of the system, which helped the research department know what was supposed to still be there. The big challenge was how to designate what was left. Lawyer and legal counsel Dorothy Minor suggested thinking of the designation as an interior designation, linked by the tracks. The infrastructure was not to be regulated for two reasons. First was so that the subway system did not become “frozen in time.” LPC understood that the infrastructure itself needed the flexibility to be upgraded for passenger safety and convenience whenever possible without the delay of going through a review process. The second was to make the designation more palatable to NYCTA, who had just begun a modernization campaign.⁸²

From there, sites were chosen based on a combination of factors. Again the Historic Structures Report acted as a springboard. Also taken into the consideration was the original line that was celebrating the Jubilee Year and how it operated. The research department at LPC, responsible for researching and writing designation reports, recognized that the designs were unique to each station and provided a form of “branding” to make the locations easily identifiable. A large portion of the research relied on historic photographs and site visits. The stations at the time were so neglected that the historic features were still recognizable under all of the grime. Former Director of Research for LPC, Marjorie Pearson, compared it to “looking at an abandoned building” to see the potential underneath.⁸³

This led to a very exact outline of what is and is not included in the designation of these 12 stations. For example, Manhattan’s Astor Place station had precise elements of its interior designated such as the walls adjacent to the platforms and the entrance areas, which protected the historic mosaic tile, glazed tile, faience plaques and moldings, brick wainscoting, and the columns surfaced with glazed tile located on

⁸² Ibid.

⁸³ Ibid.

the platform and entrance areas. The walls adjacent to the extended platform are not included in the designation.⁸⁴ This reflects LPC's tendency to designate the most decorative elements of architecture, and is consistent for all of the stations that were landmarked at this time. The Astor Place station was renovated four years after its NYC interior designation so it is safe to surmise that the designation helped to guide this station's rehabilitation.

Narrowing the scope of the report also meant focusing on only the original historic fabric. Nearly all of the platforms had been extended to accommodate larger trains for larger numbers of patrons and some of these extensions were historic in their own right. The portions of the stations that were not included in the interior designation were those walls that were extensions to the original walls of the station and the structural portions of the stations, including the steel and cast iron beams. Other elements are not mentioned specifically in the designation, leaving them open for alteration without review during a possible station rehabilitation project. These include station ceilings, floors, furniture, columns, fare control areas, and other elements that could be original. Above-ground elements, such as sidewalk station entrances are not included in the designation.

The Borough Hall station in Brooklyn had portions of its Lexington Avenue line designated, such as the walls adjacent to the platforms, including all mosaic tile, glazed tile, faience and terra cotta plaques and moldings, and marble wainscoting. The walls adjacent to the extended platform are not included in the designation, as at Astor Place. The same is true of the Fulton Street station, the Bleecker Street station, the 33rd Street station, and the 59th Street/ Columbus Circle station in Manhattan. Also designated is the City Hall station in Manhattan, which has been closed for public use since 1945. The designated portions of the City Hall station are: all walls, the

⁸⁴ New York Landmarks Preservation Commission, 8.

platform, ceiling vaults, skylights, and staircases. A full list of locally designated stations can be found in Appendix B.

Effects of Local Landmark Designation

Once a property has been designated a landmark by the New York Landmarks Preservation Commission, alterations to that property must come under review by the Commission via an application for a permit. This ensures that proposed changes are sensitive to the historic character of the property. According to Section 2-03(a) of Title 63 of the Rules of the City of New York,

All applications for work on designated properties received by the Landmarks Preservation Commission are assigned to a professional staff member in the Preservation Department who will handle the project. ..If the materials are sufficient, staff will certify the application as complete and issue the appropriate permit or take other action. If the completed application requires a Certificate of Appropriateness, staff will arrange for the item to be included in the next scheduled Certificate of Appropriateness public hearing calendar.⁸⁵

Because of this law, all alterations to the landmarked stations outside of basic maintenance routines, such as changing light bulbs and sweeping the floors, have to be funneled through the approval process of the LPC. This rule also applies to all stations not individually landmarked but located in historic districts as well.

The current standing of LPC in the city is such that often the Department of Buildings will not take the time to look at a permit application for a landmarked property without seeing that it has first successfully completed review with the Commission. Ultimately, the City Council gets the final say in landmark designations and can ask for specific buildings to be considered for landmark status.⁸⁶ Local

⁸⁵ Landmarks Law (1965), *Rules of the City of New York*, sec. 2-03(a).
<http://24.97.137.100/nyc/rcny/entered.htm>.

⁸⁶ Jeff Byles, "Amid the Facades, Furrowed Brows." *New York Times*, March 19, 2006. New York edition.

landmark laws generally carry more weight than other preservation designations at either the state or federal level; the immediate community knows their landmarks better than any other level of government and that familiarity translates into enforcement.

Applying for LPC review can sometimes be a challenging procedure, especially with owners of newly-landmarked properties who do not fully understand what is expected of them during the review process. An adjustment period was necessary for NYCTA and its landmarked subway stations, especially as the state agency got used to the idea that certain of their properties fell under city scrutiny. From 1979 to 1992, and arguably until 2004, the local Landmark designation was the only sort of preservation protection and guidance offered for these few stations. Without it, wholesale historic fabric would have been compromised in some of the most intact stations. Unfortunately, the scope of LPC's designation in only looking at the original line meant that hundreds of stations, especially those not on the island of Manhattan, were left out consideration and are vulnerable to unsympathetic alterations and updates.

Introducing Preservation-Sensitive Guidelines

The first preservation project undertaken by NYCTA was the rehabilitation of the Astor Place station. Begun in 1983, NYCTA worked closely with LPC and created a successful project. Today, Astor Place is one of the few stations that still retains its glass and metal entrance canopies. Even though Astor Place was a successful project, it would take NYCTA another nine years to acknowledged its responsibility to be a better steward of its historic subway system.

In 1992, NYCTA introduced a system-wide design manual that took preservation into consideration: "Station Planning & Design Guidelines." Then NYC

Transit Authority President, Alan Kiepper, wrote in the guidelines' introduction that the manual was to "provide a vision for station architecture" that was to convert the stations "into safe, secure, customer-oriented and attractive places" that respect the history imbedded in the system.⁸⁷ The development of the Design Guidelines was a clear expression NYCTA's growing appreciation of the importance of the history and aesthetic value of its system as a legacy for the future.

This manual attempts to reconcile station rehabilitation and modernization with restoration to maintain station integrity. While advisory only, the guidelines embraced the idea that original historic fabric had a place in a modern, safe station. The idea is articulated in five chapters in the manual: Design Principles, Design Guidelines, Reference Standards, and Definitions.⁸⁸ Each chapter targets a specific topic in historic station rehabilitation and focuses on the original intent of the station architects to join art with technology to create hygienic and tasteful civic spaces.

Under the theme of "Design Principles," the manual focuses on restoring the station's physical conditions in line with what was originally intended by the architects, while providing riders with clean, bright facilities utilizing modern devices to insure safety and accessibility. Station identity is preserved through the unique color palettes and materials, just as Hines and LaFarge and Vickers had designed. Many of the other "Design Principles" ideas stem from goals set in the 1970s during station standardization and streamlining such as making sure the stations are easily maintainable.

Similarly, the goal to reduce cluttered platforms by eliminating obsolete furniture and planning for specific amenities is linked to the 1970s. Adding public art to the stations is also a top priority under the "Design Principles", which is currently

⁸⁷ New York City Transit Authority, "New York City Transit Authority Station Planning and Design Guidelines," (November, 1992). Foreword.

⁸⁸ Ibid.

spearheaded by the Arts for Transit initiative. It is mandated that all stations have some form of artwork, but that “Stations with original decorative art that is historically significant may not require the addition of new art.”⁸⁹ Finally, the section concludes with the admission that “The original character of stations should be maintained...” in a clear nod to the importance of historic preservation to the aesthetic experience of the subways.⁹⁰

The “Design Guidelines” for pursuing the ambitious “Design Principles” are similar to the Secretary of the Interior’s Standards for Rehabilitation (Standards). Using the Standards as a guide for the manual underscores that NYCTA is taking its responsibility seriously. The retention of the original character and historic building materials is stressed, but only so far as is practical, and all work must be approved by LPC. The manual fails to give a working definition for what is “feasible” in keeping historic fabric, and allows for the replacement of historic fabric with ones of similar design to maintain the “spirit” of the original station. New finishes are allowed where repair or rehabilitation is not feasible. Salvaging of artifacts in stations that require demolition or alteration of certain portions of the station and that are not LPC landmarks is another important element to the Manual’s design guidelines for preservation. Potentially salvageable artifacts are supposed to be formally identified and investigated by the Transit Museum for possible inclusion in the Transit Museum collection. While not perfect, these strategies challenge NYCTA to creatively work towards keeping the historic fabric intact.⁹¹

The “Station Planning and Design Guidelines” were revised in 2001 with very few changes or additions. Currently the Guidelines are in the process of being revised again and should be published soon. The creation and use of the “Station Planning and

⁸⁹ Ibid, Design Principles-1.

⁹⁰ Ibid.

⁹¹ Ibid, Design Principles-2.

Design Guidelines” manual has been instrumental in helping NYCTA become more standardized in their approach to historic preservation. They help to provide a framework for how to proceed with the difficult task of rehabilitating a one-hundred-year-old subway station. Since the first edition of the “Station Planning and Design Guidelines” was published in 1992, NYCTA has begun to take more seriously the preservation of its historic subway stations.

National Register Designation

As it turns out, it was fortunate that the New York City rapid transit system fell under state control. Perhaps not in the short term, since the degradation of the system still characterizes its reputation, but because it was part of state oversight when the United States government decided to pay closer attention to issues of heritage preservation. The merits of the system ranging from ingenuity in rapid transit to community planning are well documented, as is its age. All that was missing from fully grasping and acknowledging the importance of the subway was a nudge by the law.

In 1980, the New York State Legislature passed the New York State Historic Preservation Act. Like many states, New York adopted the act in accordance with the National Historic Preservation Act of 1966, which forms the legal basis of preservation in the United States today. New York’s State Act, much like the National Act, declares preservation “to be the public policy and in the public interest of this State”⁹² and sets up a state-wide register of historic places with a process of review to mitigate the impacts of changes. The State Act also required state agencies to manage their historic resources to the best of their abilities within reason and to hire a

⁹² New York State Historic Preservation Act (1980), *New York State Regulations*, Chap 3, Sec 426.1, 14.09.

preservation compliance officer to make sure that the Act is carried out. To evaluate which properties fell under the protection of the act, state agencies with the help of the State Historic Preservation Office (SHPO) had to conduct surveys of their properties. MTA New York City Transit began a multi-year examination of their properties in the early 1991, triggered in part because of its intention to demolish the King Ridge Bus Depot.⁹³

Under the guidance of Pete Shaffer from the New York SHPO, NYCTA started the process of surveying their properties by contracting the prominent New York City engineering firm of Parsons Brinkerhoff, the partnership formed by William Barclay Parsons, chief engineer for construction of the system in 1900. The deliverable was phased into three separate reports. The first described “the historical context of New York City’s rapid transit system, identified property types, and presented evaluation parameters used to assess potential sensitivity of the properties.”⁹⁴ Upon completion of the background research, Parsons Brinkerhoff developed three broad themes to help categorize the properties by their historic significance. These themes looked at technological developments, design features, and impacts on the social and urban fabric. Additionally, the report broke the properties down further by typology: signal towers, elevated stations, yards and shops, etc. The categories were then applied to approximately 1,800 properties supplied by NYCTA as possibly historically significant.⁹⁵

The second phase of the report utilized the themes and categories of phase I to examine the resources in the field and was carried out by Parsons Brinckerhoff under a second contract. In addition to the themes and categories developed during phase I,

⁹³ Hollie Wells, Sara McIvor, and Judith Kunouff (NYCTA project coordinator, preservation specialist, architect). interview with author, February 8, 2010.

⁹⁴ Parsons Brinckerhoff, et al, *Phase I: Reconnaissance Level Survey of Transit Authority Properties: Task 2 Report- Field Survey Findings*, (July 1991: Report to MTA NYCTA). I-1.

⁹⁵ Ibid, II-2.

surveyors also placed the subway stations in subcategories since each group of stations built under a particular contract has its own character. The subcategories consisted of the original IRT, the Dual System, and the IND. Field visits were conducted to develop the station's context, current function, style, and general physical condition. To narrow the scope of the survey, all stations less than fifty years old at that time were eliminated from consideration. Also eliminated were mechanical and auxiliary support spaces such as emergency exits, fan rooms, etc.⁹⁶

Phase II of the survey ultimately recommended 38 out of 82 surveyed stations for listing to the National Register. The survey followed the format of the National Register Multiple Property listing where: "the development of historic contexts and the grouping of properties by common physical and associative characteristics," is used. Evaluation criteria for the final phase of the survey judged stations based on their architectural significance, technological significance, historical significance, rarity, and integrity.⁹⁷

Under a third contract, Parsons Brinckerhoff Quade & Douglas, Inc., in association with Robert Olmsted, P.E., Li/Saltzman, P.C., Historical Perspectives, Inc., and Lynn Drobbin & Associates in connection with the National Trust for Historic Preservation, helped finish ten forms and the New York State Historic Preservation Office completed the other forms for station nomination into the National Register.⁹⁸ The nominations were done in groups because of the number of properties being proposed.

Meanwhile in 2004, the centennial of the original IRT line had come and the city of New York was preparing for a small ceremonial celebration. Meanwhile,

⁹⁶ Ibid, II-3.

⁹⁷ Parsons Brinckerhoff, et al. *Phase 2: Intensive Level Survey of Transit Authority Properties: Final Phase II Report*. (March 1995: Report to MTA NYCTA). 5, 15-16.

⁹⁸ Hollie Wells, Sara McIvor, and Judith Kunoff, interview.

NYCTA was still working to upgrade and rehabilitate the entire system. While finishing a multi-phased rehabilitation of the complex Times Square station, NYCTA requested approval from the SHPO to demolish historic signal houses. Then Section 106 reviewer, Greg Donofrio, allowed for the demolition in the spirit of improving a public good but decided to add a creative twist to the typical mitigation procedures in light of the centennial. Instead of merely requiring NYCTA to document the houses in photographs, Donofrio encouraged NYCTA to finish listing the rest of its nominated stations as mitigation. Nearly sixty of the “best” examples of the stations were selected for listing on the National Register, rounding out the list of individually listed stations seen today, Appendix B.⁹⁹ Those stations not fifty years old were eliminated from designation and a few stations were cut last minute as they had deteriorated past the point of protection during the course of the nomination process.¹⁰⁰ Additional stations are still considered to be National Register-eligible.

The section of the National Register nomination report outlining the designated areas of the different stations mimics that which were designated as interior landmarks by LPC. Only those areas of the station which are original, such as platform walls, mosaic tiles, glazed tiles, faience plaques and moldings, brick and marble wainscoting were designated. Those walls adjacent to platform extensions were not designated, also like the NYC interior designated stations. In order to show the boundary of the designated portion of each station, a map was drawn with bold line showing the border. Each designation report contains a narrative description for the station, general characteristics and construction methods, a narrative statement of significance, and photo documentation.¹⁰¹

⁹⁹ Greg Donofrio (Former Section 106 review for New York City), telephone interview with author, November 29, 2010.

¹⁰⁰ Hollie Wells, Sara McIvor, Judith Kunoff, interview.

¹⁰¹ United States Department of the Interior, National Park Service, “181st Street Subway Station,” Sections 7 & 8.

The addition of the stations designated for the National Register increased the number of individually designated stations in the NYC subway system to 44.¹⁰² This includes nearly all of the stations from the original IRT line in Manhattan, with additional stations from the Dual Contracts and the IND. Out of these 44 stations, just over half or 23, are located outside of Manhattan. From these 23, only 3 are located in Queens, and 8 in the Bronx. The rest are located in Brooklyn. The relatively young age of the stations in the outer boroughs eliminated many from consideration in this nomination, but it also reflects the Manhattan-centric nature that preservation in the city generally takes. Overall, however, these 44 stations only reflect a small percent of the properties under NYCTA's stewardship and should therefore receive close attention from the SHPO, NYCTA, and MTA alike.

What National Register Listing Means

Listing on the National Register of Historic Places (National Register) recognizes the historic value the property has on the nation at large under a select set of criteria, all of which was established under the National Historic Preservation Act of 1966 (NHPA). Benefits of listing include prestige, eligibility for federal financial incentives such as tax programs and grants, and protection against federal actions threatening landmarks. These benefits extend to properties that are not listed but eligible for listing on the National Register. Contrary to some beliefs, listing on the National Register does not freeze a property in time, which would paralyze the subway system, nor does it prevent property owners from demolishing a listed building. It only requires that applications for alterations be reviewed through the SHPO in a process set out in Section 106 of the NHPA. While Section 106 is a

¹⁰² A complete list can be found in Appendix B.

process that does not necessarily dictate preservation, it often results in compromises that lead to a more sensitive alteration to the original historic fabric.

Those projects that are funded by the Federal Transit Administration, being a federal agency, fall under the scope of Section 106 Review by the Advisory Council for Historic Preservation, pursuant to NHPA. Furthermore, the New York State Historic Preservation Act of 1980 which was passed to protect properties of historical, archaeological, architectural, and cultural significance provides for advisory review and comments by the State Historic Preservation Office of actions by State agencies and the MTA affecting National Register listed or eligible properties. Almost all of the rehabilitation projects for the stations are funded by the Federal government or the State of New York or both, which means that those projects could undergo review with the Advisory Council for Historic Preservation and the New York State Historic Preservation Office (SHPO) in order to determine possible adverse effects on the historic significance of the stations and negotiate agreements on how to proceed with the proposed projects. The Department of Transportation Act of 1966 also provides for a review commonly referred to as Section 4(f). Any transportation projects which use Federal funding through the Federal Transit Administration (FTA) are subject to review. The FTA normally provides funding to the NYCTA for station renovation projects, which means they normally go through Section 106 and Section 4(f) review.

The early local landmarks designation was a progressive decision on the part of the young LPC to recognize the importance of the subway system to New York's history. Placing the interior of the subway stations under review helped in two ways. Primarily the designation worked to save the historic character of the stations under protection, helping to stave off the historically insensitive station rehabilitation campaigns that were an immediate threat to the resource. In the long term, it introduced the idea of preservation to NYCTA as an alternative to extensively

renovating the entire system. It also acclimated NYCTA to the idea of a preservation design review process, bringing preservation to the organization's attention.

While the local designation definitely worked to preserve those first stations, its narrow scope highlighted architectural ornamentation rather than celebrating the transportation system's entire historic legacy. To get NYCTA to agree to the designation, and protect stations already deteriorating, the designated areas of the stations were scaled back from the original idea of an interior designation to a limited selective designation. While helpful in the short term by protecting decorative elements from rehabilitation campaigns, the selectivity of the designation fails to embrace the full experience of the historic stations.

With the first preservation designation by LPC, NYCTA became more conscious of the historic properties under its stewardship. The adoption of the Design Guidelines in 1992 continued to further NYCTA's recognition of preservation as a legitimate goal in the operation of the subway system. By the time of the centennial, NYCTA was prepared to complete the due process for nominating its stations to the National Register in good faith.

Backed by extensive documentation, the National Register designation reports took a holistic approach to the subway system. More stations that had not met the age requirement for the local designations were now eligible for consideration and more attention was given to stations in outlying boroughs, where the subway had enormous impact on the development of the built environment. The eligibility for more of the system to the National Register added other layers of preservation review from other laws, creating multiple layers of review supporting the local and national designations. Together, the local and national designations have helped to preserve the historic character of the subway system.

CHAPTER 4

DEVELOPING A PRESERVATION ETHIC AT NYCTA

Recognizing the historic significance of New York's subway stations with preservation designations is the first step in saving the stations for the enjoyment of future generations. The multiple designations of the subway system create several layers of review which insulate the historic character of the stations from incompatible changes. NYCTA has had to learn how to navigate these multiple review processes to fulfill its legal requirements.

At the same time, NYCTA has changed its approach to running the subway system as it became apparent that initial efforts to redesign and renovate the stations proved to be too costly and time consuming. Seeing the viability of preserving the existing stations instead of renovating them with a new design has made preservation not only a goal, but a real alternative for station rehabilitations. As preservation matters have come to the attention of NYCTA in the past twenty years, its conception of station rehabilitations of landmarked and listed stations has changed.

How Designations are Designed to Work... and How They Do

Preservation ordinances are usually the most effective at the local level. Because citizens have the greatest stake in their neighborhoods and local landmarks, designation suggestions and enforcement issues are readily brought to the local preservation commission's attention. Due to the size of New York and the treasure trove of resources it houses, this is a gargantuan task. As of 2006, LPC's 11 commission members are supported by a 57-member staff dealing with effectively 9,000 applications to alter historic landmarks per year.¹⁰³ Budget cuts, due to the

¹⁰³ Byles.

current financial crisis, are slowly chipping away at the number of staff handling permit applications and technical assistance. Due to the sheer volume of buildings handled by the LPC, the Commission is relying more and more on the suggestions of private citizens and advocacy groups for new designation applications. Increasingly, civic groups are bringing threatened properties to the Commission's attention and designations are taking on a sense of urgency.¹⁰⁴

The LPC works to maintain the difficult balance between a living city and preserving its historic resources. This often means looking beyond lavish ornamentation of what is typically thought of as a "landmark," which is sometimes hard to communicate to people without a historical background.¹⁰⁵ This is precisely what the Commission had to do back in 1979, however, to designate the interiors of those first 12 subway stations. From 1979 until 2004, the local Landmarks Law was the only protection afforded to the transit system that shaped the development of the city. Without it, many of the original stations in most need of repair during the modernization campaigns would have lost much more of their historic fabric and character to insensitive remodeling campaigns.¹⁰⁶ Examples of stations that have benefitted from the law range from the Astor Place station, renovated only a few years after designation, to initial alterations of the 59th Street/ Columbus Circle station in the 1990s. The local Landmarks Law was successful in protecting the locally designated stations.

The New York State Historic Preservation Act, put into place one year after the subway stations were locally landmarked, required state agencies to have preservation officers and consult with the SHPO whenever undertaking a project

¹⁰⁴ Ibid.

¹⁰⁵ Ibid.

¹⁰⁶ Pearson, interview.

which could impact historic properties.¹⁰⁷ This piece of legislation had direct impact on NYCTA as a state agency, with the position of the preservation officer first being filled unofficially by Hollie Wells, agency coordinator, and currently by Sara McIror. Ms. Wells began working with the SHPO, performing a triage of consolidation to stop the destruction of historic materials in the subway system where possible.¹⁰⁸

After the National Register designations were completed in 2004, NYCTA listed the information regarding the designated stations on their website, in their project management guidelines, and in other resources. The benefits of disseminating the information this way are twofold. One, it allows the public to view which stations are on the National Register and helps to raise awareness about preservation in the subway system. Two, it gives the design staff at NYCTA the ability to check the historic status of a station whenever a project comes up so that preservation concerns are present from the very beginning of the project. Once the staff determines that the project is located in a designated station, they confirm the designation with Hollie Wells. Once Ms. Wells is notified, she looks to see what source the project funding is coming from to initiate consultation. If the funding is from the state, the consultation with the SHPO begins under the state historic preservation law Section 14.09. If the funding is from the Federal government, the project moves forward under Section 106 of the NHPA.¹⁰⁹

Other laws, specifically the National Environmental Protection Act and the Department of Transportation Act (1966), both have review procedures that are defined widely enough to encompass historic preservation considerations. Both laws are regularly engaged by MTA as an agency overseeing transportation. When a project by a federal agency or using federal money presents an undertaking, often the

¹⁰⁷ *New York State Historic Preservation Act*, sec 14.09.

¹⁰⁸ Hollie Wells, Sara McIror, Judith Kunouff, interview.

¹⁰⁹ *Ibid.*

Environmental Impact Statement process is triggered. If the scope of the project is large enough, such as the current construction of the Second Avenue line, the lead agency must prepare an EIS detailing the impacts on the full environment. In NEPA, the term environment is defined broadly to include the built environment, meaning that the impact on historic resources must be considered as well. These laws' review sections must be started early in the project and usually work hand in hand with the preservation laws' review.

Not all locally landmarked properties are on the National Register, which is another reason why the local preservation ordinance is important. Properties listed on the National Register relate to history with national significance, and therefore properties with value in the local community and not nationally can be excluded from the protection. The New York state Historic Preservation Law specifically targets state agencies and provides a guiding mechanism towards historic property stewardship. While none of these laws can stop demolition of historic resources on their own, when all of the layers of legal protection are working properly, creative solutions are reached to mitigate the impacts of work done to historic properties.

Today all of these laws are being followed more closely than ever before at NYCTA, thanks to the dedicated preservation staff. The exact acts of compliance, though, function differently than designed. Although the local landmarks law has protected 12 interiors since the late 1970s, and it is in theory more protective of historic resources than preservation laws at the state or national level, the amount of discussion with the LPC has declined. More often, NYCTA works more closely with the SHPO while interactions with LPC are more of a formality.¹¹⁰ LPC is aware of the projects going on in the subway system, but they defer to the decisions made by the SHPO. The SHPO is bound to use the Secretary of the Interior's Standards, so the

¹¹⁰ Hollie Wells, Sara McIvor, Judith Kunouff, interview.

projects are being evaluated on the proper principles. This effectively eliminates a layer of protection from the stations, even though it cuts down on the amount of paper work and red tape for everyone involved. The state ordinance also places consultation for projects on the SHPO. This puts a heavy burden on the SHPO, as applications are often first being compiled for Section 106 review and do not always contain all of the information necessary for a decision.

As of the end of 2009, Beth Cumming, the current Section 106 reviewer for New York City at the NY SHPO, had received 600 submissions over the course of the year, a full 10% were exclusively from NYCTA. She was also in contact with the agency twice a week on average, which does not include subway-related material not submitted by NYCTA.¹¹¹ Helping Ms. Cumming keep up with the reviewing load from the subways is better project submissions by a trio focused on preservation at NYCTA. This trio is made up of Hollie Wells, preservation liaison for a number of years; Sara McIror, technical preservationist and recent Columbia graduate; and transit architect Judith Kunoff. Before Ms. Kunoff and Ms. McIror came onboard, Ms. Wells was alone in trying to perform preservation triage on the station suffering from maintenance so deferred that something had to be done. Her efforts undoubtedly helped save what has remained in the stations through her connections with the transit workers themselves.

Preservation Within MTA NYCTA

The 1977 MTA Annual Report is the first instance where the organization recognized that a majority of their funds were going towards rehabilitation projects instead of new construction. This shift in focus stemmed from a report conducted in 1967 and commissioned by Governor Rockefeller entitled, “Metropolitan

¹¹¹ Beth Cumming, discussion with author, February 19, 2010.

Transportation—a Plan for Action.” The report essentially outlined a Master Plan for the rehabilitation of the New York subway system and provides the first glimpse of long-term planning MTA had conducted. The “Transit Betterment Program” was the product of all the planning, and began by focusing on problems caused by deferred maintenance and neglect. Just three years after the report in 1967, nearly all the stations had been repainted, rolling stock had been cleaned and repainted, and the tracks were being cleaned. This one-time cleaning push was not enough to reverse the years of neglect plaguing the system, but it was the first step in years to improve the deteriorating conditions of the stations. It was also the first time that the concept of station “modernization” was raised.¹¹² Over the next year, the program continued to upgrade cleaning schedules for the entire system and MTA as a whole sought to enlarge the system with multiple new building campaigns.

The first of the trial station modernization campaigns began with the Bowling Green station in lower Manhattan in 1972. Redesigned by architect Philip Johnson, the original historic fabric was completely paved over in a dappled pattern of red and orange glazed tiles. Historic photographs of the original station design were hung on the new walls, a lowly reminder to the design that once was there (Figure 11). Similar tile resurfacing in addition to technological upgrades for safety and passenger comfort were put in at both the 49th Street and 50th Street stations. “The original walls that were so carefully designed for their beauty, ease of maintenance, and station identification were thoughtlessly dismissed as something from a bygone era that needed to be covered over, and quickly.”¹¹³ The uniqueness of the historic designs was completely overlooked in the rush to improve and standardize the entire system.

¹¹² Metropolitan Transit Authority, “Two Years Transportation Progress,” (March 1970), 1.

¹¹³ Sara Taylor, “Underground Stations of the New York City Subway System: Recommendations for Preservation and Maintenance” (master’s thesis, Columbia University, May 2008), 20.



Figure 11: Bowling Green station, redesign. Photo by author.

Coming from the engineering mindset of efficiency, and looking at an entire system in need of rehabilitation, the NYCTA viewed these first three modernizations as a model for which all the stations could be overhauled to meet modern standards. It was at this time that rehabilitation projects began to take precedent over new construction.

Even though much historic fabric was lost during this first round of modernization programs, the programs themselves raised awareness as to the degradation of the subway system and its need for future programs to completely rehabilitate the aging resource. With the daunting task of rehabilitating the entire system, by 1977 NYCTA moved away from station rehabilitations that installed completely new station designs and instead began just to refurbish older stations and selecting replacement materials necessary for ongoing operation.

Also beginning in 1972, MTA received grants from all levels of government for capital programs. One of the first capital programs instituted in 1978 was the Accelerated Transit Program (ATP) whose goal was to rehabilitate the subway and bus systems of New York City over a six year period with a budget over \$765 million. It was under the auspices of ATP that smaller programs such as Operation Facelift and Adopt-a-Station were conducted. Both of these smaller programs utilized community organizations to execute minor station repairs, usually cosmetic such as repainting stations. Even with the rehabilitation budget of ATP, MTA was still struggling to resolve service problems and the poor condition of the entire system.¹¹⁴

Finally in 1981, the New York State legislature passed a Capital Improvement Program for the restoration of the New York City subway system to the tune of \$7.2 billion. Under this Capital Improvement Program, NYCTA selected 50 stations for modernization, seven of which were extensively documented by the Perkins & Will Partnership. The recommendations by Perkins & Will Partnership called for the preservation of certain elements of each of the stations, such as tile work, mosaics, and station exteriors.¹¹⁵ This is an early example of preservation recommended for the subway system and is at odds with the absolute renovation NYCTA had recently completed at the Bowling Green station. These recommendations for preservation were the exception, and not the rule. NYCTA continued to repair deteriorated stations with modern materials, often juxtaposing new dark-colored tiling next to the original white glass tiles on walls, giving stations rehabilitated at this time a hodge-podge appearance (Figure 12).

¹¹⁴ Metropolitan Transit Authority, "Metropolitan Transit Authority: 1978 Annual Report," (1978), 2.

¹¹⁵ Perkins & Will, "Modernization of Rapid Transit Stations: Conceptual Design Phase/Submission 1A," NYCTA File Number CM-411, NYCTA Consultant Phase No. A-86311, (1982).



Figure 12: Example of a patchwork station repair at the Chambers Street Station. Notice the original white glazed tile cladding on the pilaster at left and the newer yellow-beige replacement tiles covering the wall. Photo by author.

By 1987, it was clear that the Station Modernization Program was not working. The costly rehabilitation projects were taking three to five years each, a time frame too long for the immediate needs of the deteriorated system. In its place, NYCTA initiated a more modest program calling for smaller revitalization and restoration projects, which were more cost and time effective, and an improved maintenance plan.¹¹⁶ Preservation would not resurface as a primary goal at NYCTA until the Design Guidelines were introduced in 1992.

In the Capital Plan 1992-1996, the Station Modernization Program was renamed the Station Reconstruction Program. At the same time, the Station

¹¹⁶ Metropolitan Transit Authority, “Metropolitan Transit Authority: 1987 Annual Report,” (1987), 8.

Rehabilitation Program was created to restore stations to their accurate historic appearance. These two programs worked in tandem to provide the best treatment for station rehabilitation projects. A comprehensive survey of the stations' structural conditions, including impacts on the station such as usage, was conducted to guide the development of the Design Guidelines.¹¹⁷ The structural conditions report and the Design Guidelines gave NYCTA a preservation-minded approach to conducting station rehabilitations and helped to make the projects more efficient. The Capital Plan approved in 1992 was replaced by a new Capital Plan of 1995-1999 which increased spending on station improvement programs.

Beginning in 2000, substantial portions of the MTA budget were being diverted into station rehabilitation and preservation projects. In 2000, 20% of the Capital Programs budget of just over \$10 billion was set aside for station rehabilitation projects.¹¹⁸ For the 2005-2009 Capital Plan, more than half of the \$21 billion budget was reserved for rehabilitation projects.¹¹⁹ When budgeting for the station rehabilitations, NYCTA has learned to allot more money for station projects that require preservation-minded review with the SHPO.¹²⁰ With the increased budget for station rehabilitations, NYCTA is demonstrating its commitment to continue to bring about a system-wide rehabilitation with increased preservation values.

The recent history of preservation at NYCTA began with the local landmarks designation, which was NYCTA's first official encounter with legal preservation requirements. The local designation challenged NYCTA to be more creative in finding rehabilitation solutions for the designated stations, saving historic fabric in the process. At the same time that NYCTA was getting used to navigating the local

¹¹⁷ Metropolitan Transit Authority, "MTA Capital Programs: 1992-1996," (Oct. 1992), I-3.

¹¹⁸ Metropolitan Transit Authority, "MTA Plan for 2000-2004: Capital Plan, Strategic Business Plan, Financial Plan," (Sept. 1999), 37, 48.

¹¹⁹ Metropolitan Transit Authority, "Metropolitan Transit Authority: 2005 Annual Report," (2005), 8.

¹²⁰ Hollie Wells, Sara McIvor, Judith Kunouff, interview.

landmark designation's legal requirements, the organization saw its money being funneled into selectively rehabbing stations rather than instituting new construction. Between the changing direction of the flow of money and the legal obligations to preservation, NYCTA began to be steered towards preservation. This culminated in NYCTA listing more stations on the National Register in 2004. With the listing of the stations, more layers of legal protection were afforded the stations under the preservation designations in addition to other statutes that incorporate preservation-related review. Today NYCTA continues to improve at fulfilling its legal obligations through the work of its preservation staff, and there are encouraging signs that the new found preservation ethic will continue.

CHAPTER 5

PRESERVATION CHALLENGES IN A DYNAMIC SYSTEM

The subway, as a dynamic system, provides a unique set of challenges to preservation ideology. The subway is first and foremost a public transportation system and its managers are accountable to the public. Safety cannot be compromised; service must be fairly on time; rolling stock and stations must be reasonably clean; prices must be tolerable; codes and statutes must be followed and obeyed; and a continual upgrading to modern technological standards for comfort and efficiency is expected. This is all in addition to the fact that the subway system runs twenty-four hours a day, seven days a week. There is no real opportunity to close a station for restoration work; stations only close for emergencies or public safety threats, and the work required to eliminate the potential problem.

In addition to the challenges of the system operation, NYCTA must find solutions to obligations to its constituency, its financial department, and the government. Station safety is one of the biggest concerns for NYCTA. Crime, terrorism, and dangerous physical station conditions, such as keeping travelers away from the platform edge, are issues that the public demands that NYCTA address. Internally, the organization is struggling financially with the burden of rehabilitating, maintaining, and operating the subway. Especially as a public service run by the state, the subway system must follow government accessibility laws which many historic stations do not easily accommodate. Each of these problems tests the creativity of preservation specialists working with New York's transit system.

System Operation in a 24-Hour Environment

New Yorkers have come to expect that their mass transit system will be open 24 hours a day, always. The demand placed on the transit network makes it difficult for NYCTA to adequately clean the stations and tracks, let alone schedule closings for maintenance and rehabilitations. Preservation specialists at NYCTA stressed the difficulties in keeping even newly-renovated subway station clean. Maintenance staff are up against millions of passengers a day, many of who litter, graffiti, and otherwise desecrate the public space available to them.¹²¹

To lessen the impact on its customers, NYCTA closes stations primarily at lower ridership time periods such as late nights or weekends, which has both pros and cons. In the past, this led to a delay in solving problems in individual stations so that several issues can be dealt with in one station closure instead of multiple service disruptions. Just recently, a new maintenance plan was instituted by the authority's chairman, Jay Walder, which should mean an end to delayed maintenance practices in the system. "The idea," he explained, "is that the authority's efforts to achieve a 'gold standard' in its endeavors, like putting off piecemeal repairs in favor of an overhaul for a station, ultimately resulted in worse service."¹²² This is welcome news to all subway passengers and preservationists since deferred maintenance is an obstacle that older, deteriorating stations do not easily overcome. NYCTA also tries to maintain a strict timeline for project completion so that stations can resume normal service as quickly as possible.

These station closures are mainly so the NYCTA can remove obsolete systems, repair problems, perform rehabilitations, and upgrade security measures. In historic stations, implementing these improvements often mean the removal or damage of

¹²¹ Wells, Hollie, Sara McIvor, Judith Kunouff. Personal Interview. 8 Feb. 2010.

¹²² Michael M. Grynbaum, "Subway Station Needs Repairs? New MTA Policy May Speed Up Work," *New York Times*, Apr 27, 2010, New York edition.

original historic material. This presents a quality issue since the work is being completed during off-hours and properly-trained personnel or supervisors may not be present. Thanks to the Station Planning and Design Guidelines manual, information on the proper treatment of these stations is available to the workers, but there is no feasible or economically viable solution at the moment to ensure that the steps are being followed.

The purposeful lack of continuity in the subway designs and materials presents a challenge for NYCTA. Because there is no system standard, there is not the benefit of being able to order in bulk mass amounts of material to have on hand for quick repair jobs. Also problematic is the ability to find adequate replacement materials. In some cases, such as the white glass tile used in the earliest subways, the suppliers have gone out of business and the product is difficult to find. In other cases, MTA does not sanction the use of the original building materials due to safety reasons. So while the designs have a strong historical presence and were practical for the time in which they were built, they present practical problems to preservation in addition to daily maintenance.

Safety Issues: Crime and Station Conditions

The most prominent issue facing NYCTA in all of their activities is providing a safe environment for its patrons. Safety has been a concern ever since the opening of the system when a wealthy businessman among the crowds waiting to see the system unveiled had his diamond stickpin stolen.¹²³ Through the late 1970s violent crime on the subway rose to the point where MTA instituted a policy of a transit police officer on every train and every platform through the night.¹²⁴ While violent crime is on the decline in the subway today, a multitude of other safety and public

¹²³ Fischler, 208.

¹²⁴ Ibid.

welfare issues have surfaced such as the threat of a terrorist attack on the system. These issues must and always take precedent over preservation-related ones, especially since MTA is a government agency and one of the roles of the government is to protect the health and welfare of its constituents.

In the intervening years since the subway's opening, a variety of solutions have been used to combat the safety concerns raised in the underground. To this end, NYCTA has installed better lighting and security cameras in addition to the presence of the transit police. Architecturally, safety precautions are manifest in the placement of handrails, the bumpy, yellow warning tiles along the platform edges, signage, and the way in which the fare control system—for example, the gates and turnstiles—function. NYCTA has also involved the public in both educational campaigns to raise their own awareness while using the subway and as watchdogs for suspicious activity.

In recent decades, as the population of New York City has increased and ridership of the subways has gone up, the issue of overcrowding has resurfaced.¹²⁵ Platforms fill up dangerously during rush hour, and increasingly more on the weekends as service is cut back, crowds flood the corridors, and the turnstiles are inadequate at functioning as entrances and exits as the swarm of people prove too great for the bottleneck area. To remedy these concerns, high-volume stations, such as 59th Street/Columbus Circle need to be widened to accommodate the foot traffic.

In the case of 59th Street/ Columbus Circle, the platforms were too narrow and the original walls needed to be pushed back several feet. However, 59th Street/Columbus Circle is both locally designated and listed on the National Register, which meant that the whole procedure fell under review. This proposal, while an

¹²⁵ The issue of overcrowding is not new to the subway system. On the fourth day the subway was opened, one million passengers decided to ride the tracks when the system was only designed for 350,000 people and many had to be turned away. The original Contracts 1 and 2 proved so successful that demand for an extended system lead to the inception of Contracts 3 and 4. Fischler, page 96.

adverse impact to the historic resource, was necessary for public safety. To mitigate the impact, NYCTA hired the preservation firm of Jablonski Berkowitz Conservation, Inc to prepare a report of the historic fabric still in the station. In the 2003 recommendations to NYCTA, the firm detailed how to salvage the original material from the walls to reuse in the expanded station. This is precisely the kind of compromise that will be necessary to incorporate preservation into the solutions for safety concerns.¹²⁶

During the course of demolition for the station widening project it was discovered that behind the current walls in portions of the 59th Street/ Columbus Circle station there remained the intact original mock-ups of competing glass tile manufacturers from the station's construction. It was an exciting find and NYCTA, with guidance from the SHPO, decided to showcase the urban archeology in situ after the station's renovation campaign is complete.¹²⁷

Money Problems

Money is the eternal motivator and there never seems to be enough of it around, especially where the New York City subway is concerned. The subway system's financial woes stem from the highly-politicized debate regarding its five cent fares that failed to compensate for the dramatic increase of inflation during the Great Depression, which originally threw off all the financial studies conducted for the building of new lines. As the subway declined through deferred maintenance, it needed more and more money to renew the resource. When true modernization and rehabilitation began, the budget had to focus its efforts on upgrading the entire system. Its current money problems are well known, splashed periodically across the *New York*

¹²⁶ Hollie Wells, Sara McIvor, Judith Kunoff, interview.

¹²⁷ Ibid.

Times as Albany provides money to offset fare hikes and service is cut back.¹²⁸

According to NYCTA architect Judith Kunoff, money is the biggest obstacle facing preservation in the subway system.¹²⁹

Funding for the New York City subway comes from a variety of pots, but notably from the FTA, New York State, the City of New York, and some private sources. This money has to be shared not just among the subway's own many needs, rolling stock, maintenance, track repair, and modernization, but among all New York transit under MTA's domain, including buses, security, utilities, and the Staten Island Railway. Monies from New York City to sustain its own public transportation system have been drastically slashed over the years.

Therefore, the slack has had to be picked up by the state and federal government, and MTA hangs at the mercy of elected officials for help balancing its budget. Much as Pennsylvania had considering placing tolls on Interstate 80 to help pay for ailing transit networks in Pittsburgh and Philadelphia,¹³⁰ tax payers in upstate New York are being unfairly asked to help pay for a transit network that does not immediately benefit their daily activities. At the same time, these elected officials are trying to balance the burden of transit costs to New York City's large population living at or below the poverty line.

That being said, preservation ends up on the low end of the totem pole of priorities. With funding scarce, those stations with the worse problems, infrastructure issues, water damage, ADA compliance needs, are bumped to the top of the priority list. The costly issues of accurately replacing historic fabric automatically make preservation less than appealing in this atmosphere, although MTA recognizes that

¹²⁸ William Neuman, and Nicholas Confessore, "Lawmakers Strike Deal to Rescue Transit," *New York Times*, May 6, 2009, New York edition.

¹²⁹ Hollie Wells, Sara McIvor, Judith Kunoff, interview.

¹³⁰ "It Tolls for Thee," *The Economist*, May 20, 2010, <http://www.economist.com/node/16166590> (accessed May 22, 2010).

work on historic stations will most likely cost more and tries to include that in the initial allotment for the project.¹³¹ Also a budgeting issue is finding the resources for station maintenance after rehabilitation is completed. While federal and state money requires that preservation is treated sensitively through the legal review processes, it is often hard for MTA to justify the expense of full restoration with its already red bottom line.

Legal Requirements: Accessibility

Possibly the hardest code requirement to satisfy in any of the subway stations is the Americans with Disabilities Act (ADA) accessibility law. Passed in 1990, the bill augmented New York State's own legislation from 1984 which focused on providing accessibility to the disabled and the elderly. In light of this legislation, MTA decided to allot \$25 million for the upgrading of a select number of stations to fulfill the accessibility requirements.¹³² This is a major undertaking for the transit system since many of the stations were never made easily accessible for the disabled or elderly. Retrofitting the stations with elevators from street level provides the challenge of matching aboveground and underground useable space. Elevator entrances have to be located on sidewalks, not in the middle of streets or buildings. Similarly, elevator exits at station level have to emerge at fare control areas or on the platform itself, not in the middle of tracks.¹³³ In 1985, MTA voted to extend funding for this important project, promising \$5 million a year over the following eight years.¹³⁴

¹³¹ Hollie Wells, McIror, Judith Kunoff, interview.

¹³² Metropolitan Transit Authority, "Metropolitan Transit Authority: 1984 Annual Report," (1984), 16.

¹³³ Hollie Wells, Sara McIror, Judith Kunouff, interview.

¹³⁴ Metropolitan Transit Authority, "MTA Strategic Operating Plan: 1988-1992," (June 1987), 1-11.

The stations selected to be in compliance with ADA must follow comprehensive design guidelines, first introduced in the 1992 Design Guidelines from NYCTA and approved by the Federal Transit Authority (FTA). These stations must be retrofitted even if the work is not part of a larger comprehensive rehabilitation plan, and are scheduled for work over a twenty year plan. The retrofit reexamines the stations' circulation patterns, elements of station usage such as ticket booth placement, signage, warning systems, public amenities, and platforms. Currently NYCTA plans to have 100 stations fully-accessible by 2020 with a benchmark of 66 accessible stations by the end of this year. All new stations currently planned, such as those for the new Second Avenue line, are already designed with ADA accessibility in mind.¹³⁵

The challenge of ADA accessibility requirements from a preservation stand point is the destructive nature of retrofitting older stations with ramps, elevators, and other provisions. Older stations have a tight, economical programmatic design which does not leave much free space to install the additional elements such as elevators in the already cramped underground. Careful planning is required for these projects when they must occur in designated or eligible stations to protect historic materials and finishes. This is not to say the disabled and elderly should not be able to enjoy the historic subway stations on the various lines. It is, however, particularly challenging to maintain historic character while simultaneously providing access.

Additionally, NYCTA is selecting which stations will be retrofitted to be in compliance with ADA. Currently, only 53 out of the 468 stations are landmarked, listed, or considered eligible for listing. This represents roughly 11% of the stations currently in revenue service. With only 11% of stations falling under individual preservation ordinances, it would be helpful, and in many respects easier, if NYCTA

¹³⁵Metropolitan Transit Authority, "MTA Plan for 2000-2004: Capital Plan, Strategic Business Plan, Financial Plan," (Sept. 1999), 49.

were to avoid promising these 53 stations to ADA compliance and select other stations not protected by historic preservation designations. It would help cut the cost and timeline of planning and executing these projects to retrofit stations that do not trigger the 106 Review process. Unfortunately, this level of foresight cannot always be implemented, such as the case of the Courthouse Square station discussed later.

Ultimately, NYCTA must act in what is perceived as its best interest in serving the public, and preservation goals are often pushed to the back burner. But when adequately planned for, preservation can be woven into the solutions for the many challenges that NYCTA faces. The new attitude towards maintenance practices should help alleviate the stresses of deferred maintenance on older stations. Improvements to stations to reduce crime and protect passengers present the opportunity to design professionals to challenge themselves to sensitively insert modern equipment into a historic environment. Incorporating preservation values into projects from the beginning and avoiding large projects that dramatically alter designated stations will help alleviate the financial burden associated with preservation and streamline project timelines. The challenges to preservation in a dynamic system do not have to be in conflict with the quality of service NYCTA wishes to provide.

CHAPTER 6

CASE STUDIES

Since first dealing with the local designation of 12 stations in 1979, NYCTA has begun to develop and use a preservation ethic towards the stewardship of its historic transit system. This principle is just beginning to be woven into transit planning from the emergency response to the 181st Street collapse to the archeological find of the glass tile mock-ups at the 59th Street/ Columbus Circle station. NYCTA's preservation ethic is exemplified in certain cases more than others, as demonstrated in the cases of the Wall Street station, the Courthouse Square station, and the City Hall station. Figure 13 shows the modern New York City subway map overlaid with the case study locations.

Each case study was selected for its particular view into the preservation practices at NYCTA. The first case is the Wall Street Station in Lower Manhattan. Located in a wealthy area of Manhattan, this station demonstrates the attention from stakeholders given to Manhattan preservation projects in the city. This case highlights and brackets the changes in the preservation ethic at NYCTA in the two rehabilitations it has undergone. The second restoration campaign showcases the strides that NYCTA has made in being better stewards of its historic resources. However, the conflicting opinions within MTA for the final elements of the project demonstrate the need for continued education about preservation in the organization.

The second case study examines preservation practices with a large project at the Courthouse Square Station in Queens. As a foil to the Wall Street Station, the Courthouse Square Station is an elevated station located in the less wealthy Long Island City neighborhood. In other projects, such as the restoration of the White Plains Station in the Bronx, NYCTA has proven that it can sensitively conduct



Figure 13: Current New York City subway map with highlighted case studies: 1) Wall Street Station 2) Courthouse Square Station 3) City Hall Station. Number 4 is the location of the 181st Station mentioned in the introduction. Map from MTA NYCTA, overlay by author.

projects on the elevated platforms. This ethic was not utilized in the Courthouse Square Case. Preservation practice in New York City is notoriously geared towards the borough of Manhattan, and the circumstances surrounding the Courthouse Square station reinforces this discrepancy and raises questions to the viability of preservation for a historic mass transportation system.

The final case study is the City Hall station, which is the only historically designated, closed station in the system. Also located in lower Manhattan not far from the Wall Street Station, the first subway's flagship station is suffering from the "out of sight, out of mind" syndrome. Even preservation specialists have a difficult time looking past the closed status of the station, which is different from how preservationists treat empty or abandoned buildings. The physical conditions of the City Hall station create wicked preservation problems, but without creativity and advocacy this architectural gem will fade away into memory.

Wall Street Station, IRT Lexington Ave Line

The Wall Street station is located in Manhattan at the corner of Broadway and Wall Street on the IRT Lexington Avenue line. Designed by Hines and LaFarge, the station first opened under Contract 2 in 1905, and is currently serviced by the 4 and 5 trains. Being part of the original line, the station was one of those selected for local landmark designation by LPC during the Jubilee Year, 1979. It was also included in the large National Register nomination for the Centennial in 2004. Since the original LPC landmark designation, the station has gone through two rehabilitation campaigns: one from 1979-1984, and a second restoration campaign from 2004-2007.¹³⁶ As discussed later, the restoration campaign, while in essence completed, has continued to

¹³⁶ United States Department of the Interior, National Park Service, "National Register of Historic Places Registration Form: Wall Street Subway Station," NPS Form 10-900, 21 July 2004: Sections 7 & 8. <<http://www.oprhp.state.ny.us/hpimaging/>>.

have elements involved in 106 Review up through January of 2010. Located in a moneyed area of Manhattan, the preservation of this station is an example of perhaps the best representation of the former beauty of the system still in operation.

The station is a classic example of Hines and LaFarge's vision for the subway system. Laid out like most local stations in their designs, Wall Street originally had a 350 foot-long platform adjacent to both the east and west walls of the station. Each of the platforms was extended by 300 feet in 1910 as the popularity of the transit system demanded, and extended a second time in 1960 to accommodate longer passenger trains.¹³⁷ The two tracks, one serving northbound the other serving southbound trains, split the space between the two platforms. The station has multiple entrances, which originally tied into the buildings directly above the station. Other entrances were added over time and a few have been closed. Entrances not in the buildings are covered with a green-painted scalloped metal kiosk.

The floor of the station, which was originally poured concrete, is covered today with grey tiles, seen throughout the subway system. A double row of textured yellow tile is placed along the platform edge. A variety of decorative finishes clad the brick substrate of the station walls. The bottom two feet is clad in a rose-colored marble wainscot. Small cast bronze fish-scale grates cover weep holes in the wainscot. The pink marble is also used to articulate pilasters which are spaced every 15 feet along the walls. The pilasters are capped with a rectangular faience capital featuring a "W". Above the capital is Wall Street's iconic moniker: a faience plaque depicting trees in the foreground, a palisade wall, and a yellow Dutch house in the background. Created by Rookwood Pottery, the plaque is visually attached to the wall by green swags that lead to cornucopia which flank the plaque (Figure 14).¹³⁸ Both

¹³⁷ Ibid.

¹³⁸ Stockey, 44.



Figure 14: Pilaster with "W" capital and faience plaque with identifying station imagery. Photo by author.



Figure 15: Wall Street station identifying name plaque. Photo by author.

the wainscot and pilasters are outlined by a trim of blue-green mosaic tile. The wall area between the pilasters is covered in a field of white glass tile. Equally spaced between the pilasters at the same height as the capitals is Wall Street's identifying mosaic name plaque. It is a black background with white block letters spelling "WALL ST" surrounded by a blue and white floral design (Figure 15). A band of blue-green mosaic tiles connects the name plaque to the pilaster capitals. Above the name plaque is a flat faience freeze featuring panels with cornucopia in relief. Above the freeze is a faience cornice line with a foliage motif. Cast iron Tuscan columns support the ceiling and are placed along the platform every 15 feet, in alignment with the pilasters (Figure 16). The ceiling of the station was originally finished in plaster featuring low-relief rosettes along architectural features, a few of which can still be seen today (Figure 17). Tunnel walls and entrances are clad in the marble wainscot and white glass tile.

The southbound platform features reproductions of lost original fabric. This includes the varnished oak ticket stand and chopper as well as a low, wrought iron fence meant to separate paid customers from those still in need of tickets (Figures 18 and 19). This fence has been extended to provide for modern circulation patterns. The southbound platform also features a Men's and Women's restroom. These were common facilities when the subway first opened, but now less than a dozen remain open to the public in their original capacity. The restroom entrances feature wooden doors with marble lintels and identifying plaques (Figure 20).

The same year that the Wall Street subway station was designated by LPC, it was also selected by the Municipal Arts Society for Adopt-a-Station and Operation Facelift modernization campaigns. Adopt-a-Station paired local organizations with stations in need of rehabilitation. The Municipal Arts Society selected the Wall Street station for its mostly intact historical fabric. MTA also agreed to underwrite the



Figure 16: Long view of Wall Street station's platform. Photo by author.



Figure 17: Detail of the Wall Street station's plaster ceiling decorations along platform edge. Photo by author.

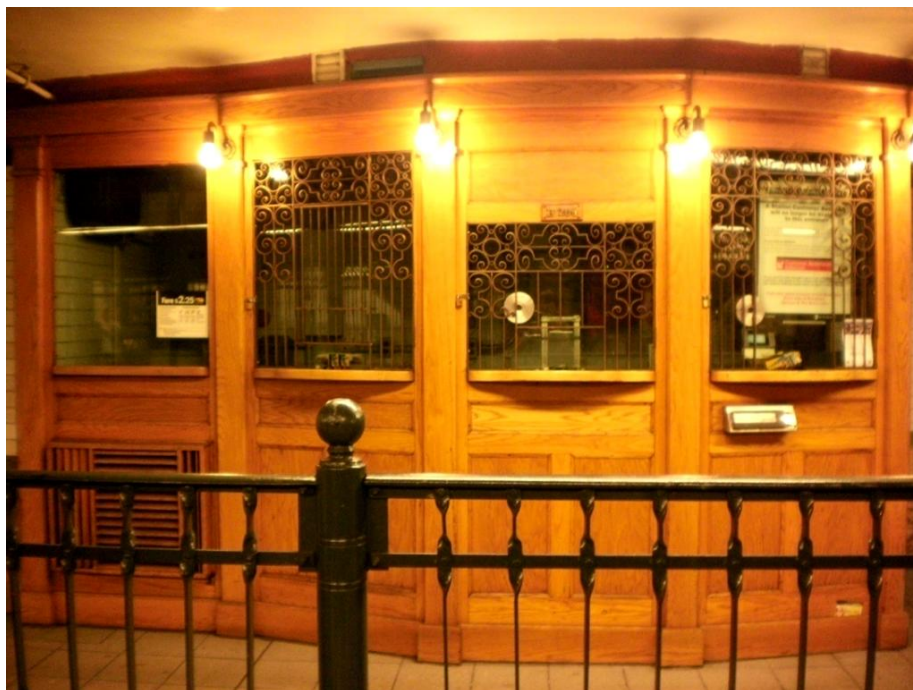


Figure18: Reproduction of the original ticket booth, added during the first rehabilitation campaign. Photo by author.



Figure 19: Reproduction ticket chopper, Wall Street station. Photo by author.



Figure 20: Original restrooms currently not accessible by the public, Wall Street station. Photo by author.

actions of Operation Facelift, which focused on new paint and signage, in conjunction with the Adopt-a-Station effort. Phyllis Cerf Wagner, the aesthetics chairman at MTA during the Jubilee Celebration, started Operation Facelift as “a new program where new paint, better lighting, increased platform seating and faster window and door replacement would make its way into the system... Under her leadership, she persuaded the MTA to back off on painting everything silver with a blue stripe.”¹³⁹ The two programs were able to successfully upgrade the station while producing very little impact on the existent historic fabric.

Funding for the rehabilitation campaign came through a variety of sources. MTA had already pledged to help fund portions of the rehab related to Operation

¹³⁹ Mark S. Feinman, “The New York City Transit Authority in the 1970s: The Diamond Jubilee Brings Optimism,” *NYCsubways.org*, Nov. 19, 2002, <http://www.nycsubway.org/articles/history-nycta1970s.html> (accessed March 29, 2010).

Facelift. For the Adopt-a-Station program, the Municipal Arts Society partnered with the Lower Manhattan Association and the New York City Office of Economic development as sponsors. Additional funds were provided by Chase Manhattan Bank, Urban Mass Transportation Administration, and the National Endowment for the Arts, as well as the Special Greenwich Street Development District. The Special Greenwich Street Development District is a fund for developers who contribute a minimum of \$2 million in exchange for additional square footage bonuses for their projects.¹⁴⁰ The Wall Street station really benefitted from its location in a wealthy area of Manhattan, drawing on the banks in the area as well as the special development fund.

The design of the station rehabilitation attempted to blend modern sensibilities with the historic character of the station. The planning of the rehabilitation had two approaches to the station. The first was to update the space by installing new lighting, signage, and floor tiles. A façade of dark blue glazed brick was selected to cover the existing damaged white glass tiles on the northbound platform (Figure 21). Visual clutter and obsolete furniture was to be removed. The second approach was to conserve as much of the historic fabric as considered “feasible,” most of which was located on the southbound platform. This included the conservation of the southbound control area and entrance, refurbishment of the ticket booth, and installation of vintage turnstiles.¹⁴¹

In practice, this created a chaotic visual impression since the northbound platform walls were covered in the blue brick with the marble pilasters left exposed above the brick while the southbound platform retained largely its historic visual appearance in white tile. This rehabilitation came at time when MTA was struggling

¹⁴⁰ Taylor, 68.

¹⁴¹ Jablonski Berkowitz Conservation, Inc, “Wall Street IRT Subway Station Existing Conditions Assessment Report,” Prepared for New York City Transportation Authority and Daniel Frankfurt, P.C. (NY SHPO file 04PR04522: August 24, 2004). 6.



Figure 21: Sample of the blue glazed bricks from the Wall Street station. Photo from *Subway Style*, page 67.

to upgrade the entire system to a state of good repair, and an engineering mindset of efficiency, practicality, and function ruled over aesthetics. The blue glazed brick façade was a “quick fix” approach to the litany of problems facing the station such as water infiltration and missing materials, and did not address the underlying causes to these problems. An additional problem with the brick façade was that it projected past the line of the original walls, reducing spaces in already cramped passageways and platforms.

When looking at the finished product it is a wonder how the plan passed through the LPC, but the rehabilitation did not destroy or remove historic fabric and had a compromise of the new, the northbound platform, to the restoration of the historic character, the southbound platform. The restoration of a reproduction token booth was a gesture that there was concern for the preservation of the character of the station, but with the negative visual impact of the pervasive blue brick, the scheme begs the question of what part of the historic character was truly preserved. With so many groups coming together to sponsor the rehabilitation, the political pressure to accept the plan was immense. No matter the ideal preservation scenario from this first

rehabilitation, it must be stressed how forward-thinking the plan was to not remove the original material when upgrading this station.

The blue brick remained from this rehabilitation until 2004. In the meantime, NYCTA implemented its new Design Guidelines in 1992 and generally took a more positive view of the stewardship of its historic resources. As the subway system was preparing for its centennial, the rehabilitated Wall Street station was having infrastructure issues, no doubt as a partial result from water infiltration and other problems not adequately addressed in the first rehabilitation. In addition to addressing the structural problems, the station was selected to be renovated.¹⁴² During the same time, the station was part of the multiple resources nomination to the National Register, meaning that any changes to the station were going to need to pass muster with both LPC and the SHPO. Furthermore, NYCTA secured funding for the renovation from the Federal Transit Administration, so the plan would also fall under section 4(f) of the Department of Transportation Act of 1966, adding yet another layer of review to the process.¹⁴³

The work for the restoration of the Wall Street station began with an existing conditions report completed by the preservation firm of Jablonski Berkowitz Conservation, Inc in August of 2004. Jablonski Berkowitz was hired as preservation consultants by Daniel Frankfurt, PC who were in turn hired by NYCTA for the project. The Jablonski Berkowitz report provided a historical narrative of the station in the form of the LPC designation report from 1979. The existing conditions document also contained detailed recommendations about how to proceed with restoring the station, including a strong recommendation to remove the unsightly blue glazed bricks. This initial report was followed up in October of 2004 with a paint

¹⁴² Ibid.

¹⁴³ Cumming, interview.

analysis of the station to continue to locate and reproduce original finishes where possible.¹⁴⁴

It was decided that like the original rehabilitation of the station, a two-pronged approach would be necessary. Instead of the modernization/ preservation approach of the first rehabilitation, this second renovation would have to deal with both the structural issues of the station and the historic aesthetic concerns. The structural issues were handled by an outside engineering firm and dealt primarily with a leaking roof and conduits running haphazardly around the station. The recommendations from the existing conditions report were worked into the documents submitted to the SHPO, LPC and the FTA for review. In the end, the proposed budget was fairly accurate and a majority of the recommendations for historic preservation were able to be implemented.

In 2005, the blue brick was removed in the rehabilitation process, exposing severely damaged white glass tile beneath. To find an appropriate substitute for the unsalvageable glass tile, NYCTA had to work closely with 106 reviewer Greg Donofrio from the SHPO. In the years since the subway opened, the exact white glass tile manufacturer went out of business, so a variety of mock-ups provided by other companies were conducted to find a close match, with the only true reproduction coming from a small source in eastern Europe. Also difficult to find was new stone to replace damaged or missing sections of the original rose-colored marble that made up the wainscot and pilasters. The best replacement stone found ended up being more grey than pink.¹⁴⁵

The following year, NYCTA requested that the SHPO allow them to use white ceramic tile on the square pillars instead of the glass tile. They had found that the

¹⁴⁴ Jablonski Berkowitz Conservation, Inc , “Wall Street Station Paint Analysis,” (Oct. 2004. NY SHPO file 04PR04522).

¹⁴⁵ Donofrio, interview.

glass tiles were not durable enough to withstand the prominent location, and broken glass tiles posed a safety threat to patrons as well as expensive to replace. There was also a flurry of activity between the SHPO and NYCTA over the placement and design of Braille signs required by ADA. In a true showing of how far NYCTA had come in their change of attitude towards the treatment of their designated stations by 2007, they were able to redesign fire valve cabinets, originally meant to be attached to the historic columns in the station, so that they did not touch any historic fabric. The station rehabilitation was completed later that year, and in 2008 HABS photographs of the rehabilitated station were taken.¹⁴⁶

While that concluded the bulk of the most recent rehabilitation of the Wall Street station, one that really demonstrates a sensitive and well-executed preservation achievement that is in quite a different character from the earlier rehabilitation, the story is not quite over. MTA has an internal policy with Arts for Transit that every station rehabilitation that is conducted gets a new work of public art. MTA oversees arts for transit, so there is some distance between the Arts for Transit program and the NYCTA which is limited to the subway system. The Arts for Transit program does not consider pre-existing art which could be conserved and employ art conservationists as sufficient to satisfy this requirement. This policy is in direct opposition to the Design Guidelines of 1992 which suggests that the public arts campaign is not appropriate for all stations, especially those of superior historic design and integrity.¹⁴⁷ So early in the second rehabilitation of the Wall Street station, Arts for Transit contact the SHPO for an opinion on the acceptability of installing bronze tapered lariats that swirl around the existing cast iron columns to be used as additional seating in the station. A similar example is found in the 33rd Street Station, shown in

¹⁴⁶ "Wall Street Station," (Docket 04PR04522: NY SHPO).

¹⁴⁷ New York City Transit Authority, Design Principles-1.

Figure 22. Since this would misrepresent the historic character of the station, the SHPO advised that the installation of these loops would be an adverse impact on the otherwise exemplary station rehabilitation.¹⁴⁸



Figure 22: Bronze laurier loops installed in the 33rd Street station. From NYCsubways.org.

Over the remaining years of the rehabilitation, Arts for Transit did not approach the SHPO about the loops. Instead, they quietly gained local political support and leverage for the arts project by enlisting the local Community Board as well as approval of LPC, which does not always share the same opinion as the SHPO. Finally in 2009, upon completion of most of the work, Arts for Transit broached the subject with the SHPO again, showing the support of the local community and arguing that public art is in the public good, suggesting that if the SHPO was against the installation they were against the public good. The SHPO remained consistent with

¹⁴⁸ Ibid.

their replies, suggesting that the loops would be more appropriate in another station nearby while Arts for Transit should consider the celebration of the restoration a work of art in itself. After nearly year-long negotiations where Arts for Transit scaled back the amount of loops to be installed and the way the loops were attached to the columns so as to not disrupt historic fabric, the SHPO deferred to the judgment of the FTA review officer. In January of 2010, the loops were approved.¹⁴⁹ The loops are a reversible feature that can be removed in the future to restore the original appearance of the station if so desired.

These two rehabilitations of the Wall Street station demonstrate a marked change in NYCTA's policy of dealing with their historic resources. The early LPC designation of the station helped to maintain in situ much of the original fabric and furbish the station with reproductions of character-defining features such as the oak ticket booth. The money sources available to this affluent area of Manhattan also contributed to the "success" of the first rehabilitation, for modernizing by only placing a veneer of blue brick in front of the original materials is one of the least invasive station modernization campaigns from this period. The attention to detail, documentation, and cooperation with the SHPO on the second rehabilitation under Section 106 is a nearly-ideal situation for preservationists concerned with the New York City subway system. A compromise with MTA's Arts for Transit program on their treatment of art in historic stations will be the final step in maintaining the historic character of high-profile station rehabilitations.

Courthouse Square Station, IRT Flushing Line

Located at the corner of 23rd Street and 45th Road in Long Island City, Queens, the elevated Courthouse Square station is part of the IRT's Flushing line. Opened in

¹⁴⁹ Ibid.

1916 under Contract no. 3, the station was designed by Squire J. Vickers with very little input from the transit commission's Chief Engineer Alfred Craven. The station is currently serviced by the 7 train at all times. In being part of Contract 3, the station did not qualify for LPC's narrowly-scoped landmark designation initiative because it was not part of the original line. Twenty-five years later, the station did warrant inclusion in the National Register nomination from 2004, even though it underwent "significant alterations" in the 1950s. The subdued Beaux-Arts station is one of only three National Register-listed stations in Queens.¹⁵⁰ The station has recently gone through the 106 Review process for changes being made for ADA requirements and to provide a transfer to the below-grade station in the area. Not having the local landmark status in addition to not being located in an affluent Manhattan neighborhood, and the station's consequent treatment, stands in sharp contrast to the Wall Street station's history.

As an elevated station, the station platform is located at the top of the structure. The platforms for patrons are at the north and south ends of the station with two tracks sharing the space in between (Figure 23). Originally, the station measured 350 feet long and 55.5 feet in width, accommodating two side platforms separated by the tracks. During the 1950s, the platforms were extended, bringing the total length of the station up to 565 feet. The station has a single control house, located partially beneath the tracks on the southern end of the platform. The control house acts as the only point of access to the platforms above via two sets of stairs to either platform. The control house is accessible by canopied stairs, two sets from the east and one set from the west.¹⁵¹

¹⁵⁰ United States Department of the Interior, National Park Service, "National Register of Historic Places Registration Form: 45th Road- Courthouse Square Station," NPS Form 10-900, July 20, 2004: Sections 7 & 8.

¹⁵¹ Ibid, 5.

The exterior of the control house is clad in painted metal panels. Square panels are located beneath the windows on the southern façade and narrow, full-height panels visually reinforce the corners of the control house. A ribbon of nine, nine-light, fixed, wood windows is located between the two sets of stairs on the southern façade (Figure 24). Both the eastern and western elevations have two, narrow, six-light, fixed windows which were replaced during the 1990s. The replacement windows closely resemble the original design. The control house has a standing-seam painted metal shed roof. The stairways leading from the street level to the control house are made of steel with wooden treads (Figure 25). The balustrade and the supports for the roof carry the most amount of ornamentation in the station. A flat, standing-seam, metal roof that cantilevers slightly past the entrance covers the stairways. The roofs over the stairs were replaced in the early 1990s.¹⁵³

The interior of the control house, which is divided into three rooms, is largely intact. The porter's room and the station department are located along the northern wall. The remainder of the space is divided into paid and unpaid areas by modern gates and turnstiles. The original ticket booth was located along the southern wall, and has since been replaced by contemporary steel and glass one (Figure 26). The walls are clad in tongue-and-groove wall paneling. The floor is of poured concrete with wooden dividing strips. The ceiling is mostly poured concrete as well, except for the underside of the shed roof where it is clad with tongue-and-groove boards (Figure 27).¹⁵⁴

The 106 Process for the Courthouse Square station was begun on October 26, 2007. It was triggered when NYCTA selected the Courthouse Square station to both satisfy ADA accessibility regulations and to retrofit the station with a transfer corridor

¹⁵³ Ibid, 6.

¹⁵⁴ Ibid, 7.



Figure 24: Original Courthouse Square facade, circa 2005. Photo by Daniel Schwen.

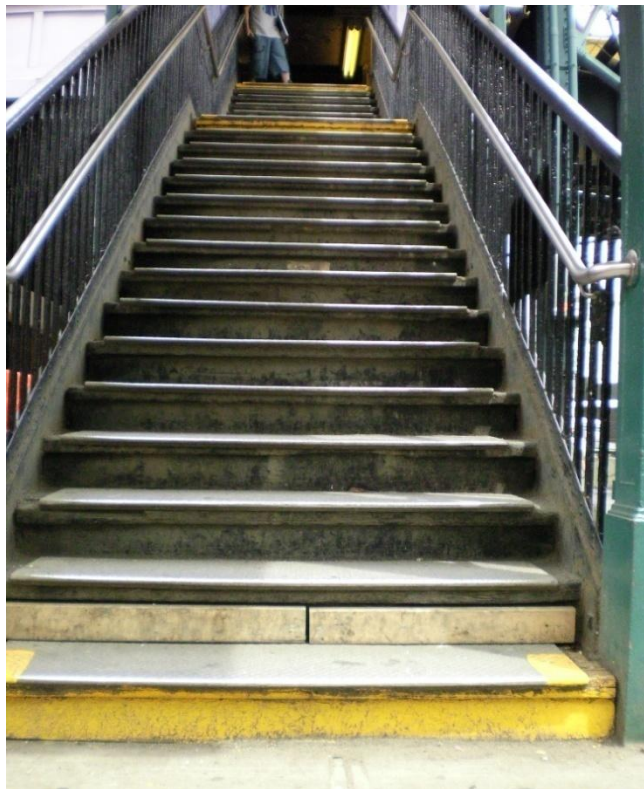


Figure 25: Wood and steel stairs leading from the street level to the control house, Courthouse Square station. Photo by author.



Figure 26: Courthouse Square station control house interior. Photo by author.



Figure 27: Tongue and groove ceiling in control house interior. The condition of the ceiling is one of the elements that the SHPO is encouraging NYCTA to restore. Photo by author.

between the elevated station and underground stations in the immediate vicinity. In total there are three underground stations that could potentially be linked to the Courthouse Squares station, creating a transfer to the G, E, and V trains which are all part of the IND system. The original proposal requires the removal of the entire east façade of the station and the closure of 45th Road to traffic to put in a glass structure that accommodates two stairs, two escalators, and two elevators to provide sufficient access between the above and below ground stations and satisfy ADA requirements. The design tentatively calls for moving one of the historic stairs from the east façade to the west, creating a symmetrical non-historic façade on the west, to salvage the historic fabric (Figure 28).¹⁵⁵

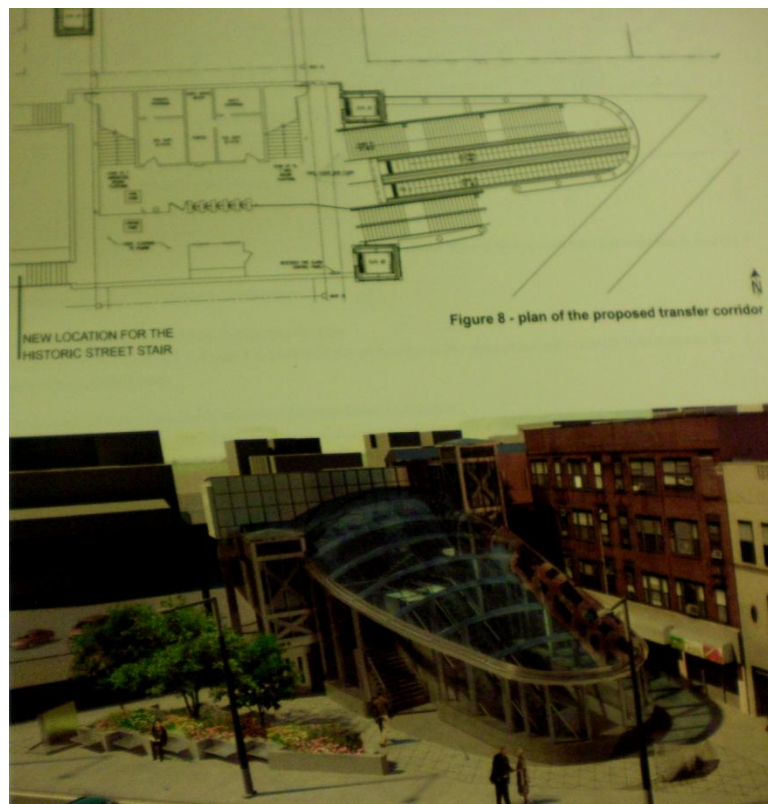


Figure 28: Original transfer corridor proposal for the Courthouse Square station. From the New York SHPO file on the Courthouse Square station.

¹⁵⁵ “45th Rd- Courthouse Square Station,” (Docket 07PR05707.003: NY SHPO).

As expected, the SHPO ruled this to be an adverse impact. The removal of an entire wall of virtually intact historic fabric destroys the character of the historic resource. Additionally, the design for the transfer passage between the under- and above ground stations, which would also house the elevator shaft for the ADA component of the project, was not sympathetic to the historic nature of the subway station. The design called for the two stairs and escalators to be set at a slight angle to the original station while the two elevators, which flank the stair/escalator core are placed flush with the station. The elevator towers have a cross-braced steel frame and are enclosed by glass with a shallow domed roof. The stairs and escalators are covered by a curved steel-and-glass canopy, which has been characterized as making the station look like it is sticking out its tongue.¹⁵⁶ Really, the only positive aspect of the original design is that it in no way could be mistaken as historic.

Through consultation with the SHPO, the design for the transfer corridor was altered. The handling of the elevator components did not drastically change from the original design, only the roofs to the towers changed shape from domed to hipped. The canopy that covers the central stair feature was modified from its curvilinear shape with a stronger emphasis on geometry. The west stair, which is to be the point of access for the elevated station on this façade, is given its own shed roof glass enclosure. The escalators and stair to the underground stations are protected by a rectilinear structure with a stepped, “camelback” form. Both masses of this structure have a shed roof with the upper portion’s roof having a steeper pitch than the lower portion.¹⁵⁷ This design, with its boxy forms, has more in common with the original station than the previous plan, and through its use of materials cannot be mistaken for

¹⁵⁶ Ibid.

¹⁵⁷ Ibid.

the original historic fabric. However, it completely obscures the original control house from view, removing all trace of the historic character from the streetscape.

After nearly a year of consultation, NYCTA and the SHPO came to a Letter of Resolution. The change had to take place due to NYCTA's obligations to ADA and its customer base, and the determination that there was no prudent or feasible alternatives that would mitigate the impact on this historically designated station. It was recognized that NYCTA had followed all the proper procedures and that the project would be permitted to be carried out as long as the SHPO was consulted on designs for both interior and exterior changes moving forward. A major obstacle to completing the project had been successfully navigated by the transit authority.¹⁵⁸

In March 2008 during investigations by the developer, it was discovered that the historic stair to be moved to the opposite façade was in poor condition. The developer ascertained that the deterioration, especially in the wooden treads of the stairs, was too bad for the stair to be moved in one piece and the entire assemblage would have to be disassembled for it to be moved. This presented a problem for NYCTA because to repair the stairs accurately when they were reassembled would mean using wood to replace the rotten treads, but wood is no longer considered a suitable material for use in subway stations due to fire hazards. No solution for the stair was put forward during this meeting, but the SHPO urged NYCTA and the developers to restore the mezzanine control house interior "as faithfully as possible."¹⁵⁹ Using this sort of bargaining, restoring the mezzanine at the price of the historic stair, may be the only way to leverage any sort of preservation for this station.

So the project is going forward and raising questions about the viability of preservation designations and the state of preservation in New York City's outer

¹⁵⁸ Ibid.

¹⁵⁹ Ibid.



Figure 29: Construction of the transfer corridor at the Courthouse Square station as of May 22, 2010. Photo by author.

boroughs. It is widely acknowledged that the short-coming of the National Historic Preservation Act of 1966 is that it has no “teeth,” no real consequences; as long as the process is followed, the recommendations of the SHPO do not have to be followed. The case of the Courthouse Square station demonstrates this perfectly. In reviewing the designs for the transfer corridor and ADA compliance, the Section 106 process pushed the developers to a more creative, and in theory more historically sensitive, design for the work that has to be executed. As the design going forward still destroys the entire historic character of the station’s south façade, the question becomes how successful preservation designations really are. Figure 29 depicts the construction of the addition as of May 22, 2010.

With only 11% of New York's subway stations designated historic, another question that is raised is why did NYCTA choose this particular station for ADA compliance? Could another station in the area that is not considered historic have been selected to serve as a point of access to the subway system for the disabled; or, conversely, knowing that Courthouse Square was potentially in the running to be one of the key stations for ADA compliance, why did NYCTA agree to continue with listing this station on the National Register? It has only made their position more difficult. Oddly, outside awareness from preservation or interest groups was lacking entirely. While there is a tight group of subway enthusiasts, there is an extreme lack of advocacy for station preservation. Additionally, the usual watchdog responsibility is on the shoulders of the local preservation ordinance, but that extra layer of review is not working in this case because the station is not recognized as a local landmark and NYCTA all but by-passes LPC when it comes to review processes of its historic stations.

The other issue the Courthouse Square station demonstrates is New York City's poor attention to preservation matters in its outer boroughs. The Courthouse Square station initially missed landmark designation because it was not in the scope of the original report. This designation has never been updated to examine stations now old enough to be historic across the entire system. The National Register designation paperwork looked at the system as entire transit network that has shaped the built environment of the city, but the bulk of the stations still remain in Manhattan.

Both designations, local and national, needed the added incentive of architectural excellence to bolster the city planning, history, and technological achievement the subway is to pass review. The Courthouse Square station, while possessing high integrity, is more utilitarian than many of the underground subways which may factor into the decision to disregard its historic character. Queens is, and

historically has been, very under-represented in preservation matters, and the three stations that made it onto the National Register should be treated with more care than the Courthouse Square station has been.

City Hall Station, IRT Lexington Ave Line

The crown jewel of Contract No. 1, the City Hall station is located under the public park in front of City Hall in Manhattan. Also known as the City Hall Loop, the station opened on October 27th, 1904 as the southern terminal of the Manhattan Main Line. The station was designed by Hines and LaFarge, who pulled all the stops on this elegant design with its now-famous Guastavino tile vaults, leaded glass skylights, and brass chandeliers. The station was closed to passengers on December 31, 1945, although it is still used by MTA as a turn-around for the number 6 trains. It was included in both the local landmark designation in 1979 as well as the National Register listing in 2004.¹⁶⁰ Currently, it is the only closed station to have preservation designations. Every few months the Transit Museum allows members to take guided tours of the station.

City Hall station's most defining architectural feature is the sharply curving tracks and platform. This is because the station is located on the western end of a tight loop, once used as the southern terminal and turn-around for the original subway line. Stations north of City Hall carry four tracks, two for express trains and two for local trains. The express tracks, located at the center of the track configuration, continue south on an upper level. The local tracks, located on the outside of the express tracks, balloon out from the express tracks, forming a loop on the lower level which turns southbound local trains on to the northbound local tracks to continue their route

¹⁶⁰ United States Department of the Interior, National Park Service, "National Register of Historic Places Registration Form: City Hall Station," NPS Form 10-900, 20 July 2004: Sections 7 & 8. <<http://www.oprhp.state.ny.us/hpimaging/>>.

(Figure 30). The balloon loop is so tightly curved that friction from longer trains has shredded the metal rails at intervals along the loop (Figure 31). It is also part of the reason that the station was closed; the curved platform made it difficult to make platform extensions that were needed to accommodate extended trains needed to for the larger passenger volume. Also, longer, redesigned cars in the 1940s had entrance doors located at the center of the car instead of at the ends like older cars. The redesign meant that the gap between the trains and the curved platform edge became too large for passengers to safely cross, a feature that is difficult to overcome (Figure 32). The station was less popular than the near-by Brooklyn Bridge station, and with the rehabilitation costs to bring the station up to modern standards, the city decided to close it.¹⁶¹

City Hall station is relatively deep compared to other stations in the southern Manhattan area. The station was entered through one of two arched stairways from the street level, leading down to a mezzanine (Figure 33). Today, only one of the stairways remains passable, the other is blocked off by rubble and sealed on the mezzanine level. Ticket booths would have been located on the mezzanine level, a large vaulted space culminating in an amethyst leaded-glass oculus which still shows traces of the black-out paint used during World War II. The oculus is ringed by a band of green and white glazed tile and eight bare light bulbs, still using the original wiring, which lights the space (Figure 34). The webbing of the vault is made up of buff-colored Guastavino tiles. The Guastavinos' tile system sets tiles in a herring bone pattern using a quick-setting mortar creating a structurally sound, centerless vault which allowed Hines and LaFarge to insert skylights into the design to provide additional light underground.¹⁶² The ribs of the vault are detailed in green and white

¹⁶¹ Ibid.

¹⁶² Stookey, 20.

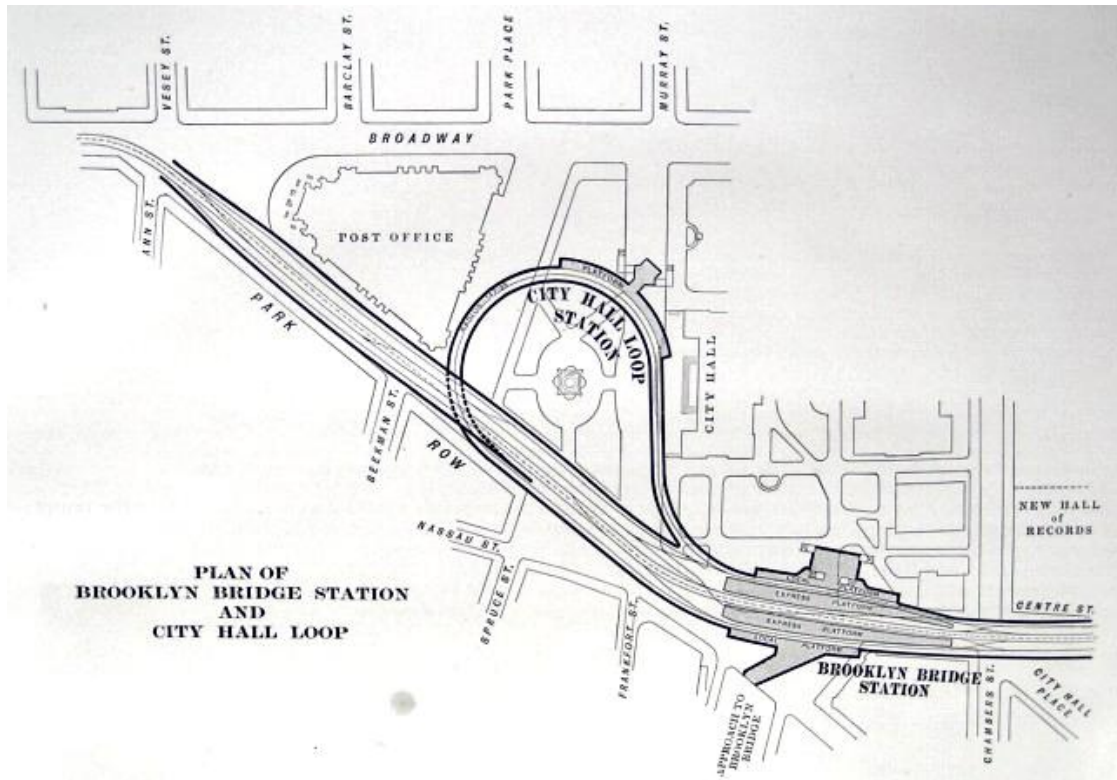


Figure 30: Map of the City Hall loop. From NYCsubways.org.

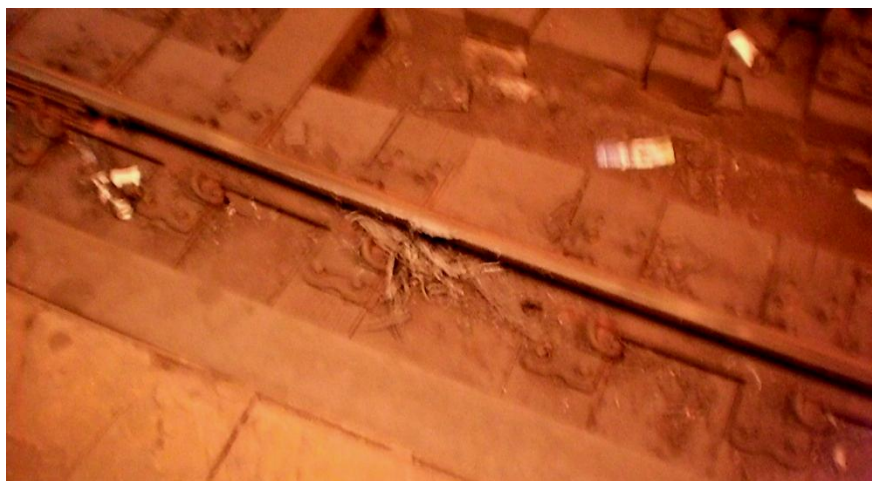


Figure 31: Track damage from rolling stock, City Hall Station.
Photo by author.



Figure 32: Gap between the City Hall platform and modern rolling stock. For the exit doors at the center of the car, this gap is the upwards of three feet. For tours, the Transit Museum has constructed a portable bridge to help members of the tour safely cross the gap from a door at the end of a car.
Photo by author.

tiles.

Below the vault, the upper portions of the walls of the mezzanine are clad in a field of large white-glazed tiles. The white field is outlined with square green tiles. The bottom portions of the walls are clad in buff iron-spot brick. Separating the upper and lower portions of the walls is a six-inch grey marble chair rail which matches the

baseboard. The chair rail acts as the spring line for vault ribs. The floor throughout the station is of poured concrete.

The platform is reached by a broad stair from the mezzanine level that has a sloped barrel vaulted ceiling clad in white tile. The arches at each end of the barrel vault are articulated with white and green tile (Figure 35). From the platform level, the arch over the stairs leading to the mezzanine carries the curved station name plaque which is illuminated by a series of four bare light bulbs placed along the arch on either side of the plaque. Across the tracks and platform from the entrance stair are three bronze plaques commemorating the opening of the subway line (Figure 36).

The platform and tracks are bridged by a series of vaults that employ the same decorative scheme as the mezzanine-level vault (Figure 37). The webbing of the center vault, as well as webbing in the vaults two down from the center on either side, is replaced by leaded glass skylights (Figure 38). The northern most skylight is missing its glass (Figure 39). The platform is lit by eight brass chandeliers featuring tulip-shaped light sockets (Figure 40). The east and west walls of the platform are clad in buff iron-spot brick with a grey marble chair rail. The east wall has a single bare light bulb centered between each of the vault ribs. The west wall carries the City Hall identification plaques, simply handled in faience, north and south of the entrance stair. The north and south walls, where the train enters and exits, are treated with the same white tile and brick decorative scheme as the mezzanine.

City Hall station has sat empty since it closed in 1945. In April 1995, the New York City Transit Museum applied for federal grant money to reopen the station as a branch of the museum.¹⁶³ The Transit Museum would be an ideal steward for this historic resource, proven by its record of restoring and using another closed

¹⁶³ Joseph Brennan, "City Hall (IRT)," *Abandoned Stations*, 2002, <http://www.columbia.edu/~brennan/abandoned/cityirt.html> (accessed April 12, 2010).

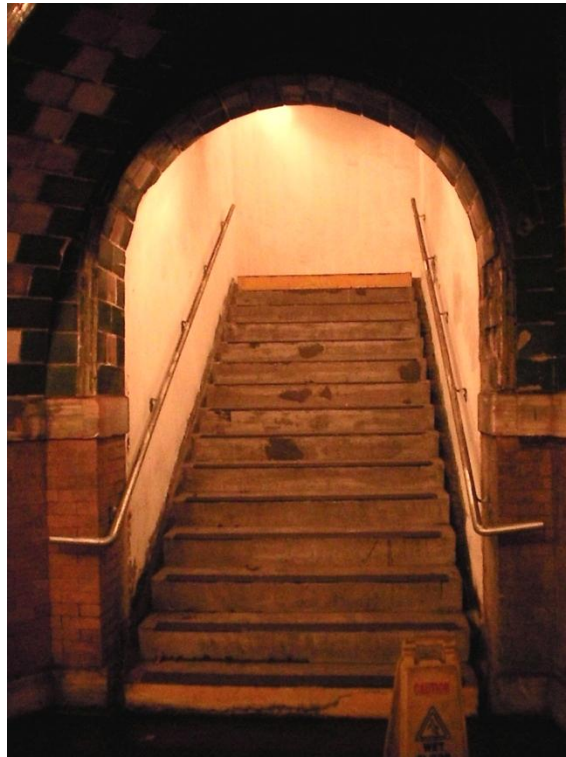


Figure 33: Entrance stair to City Hall's mezzanine. Photo by author.

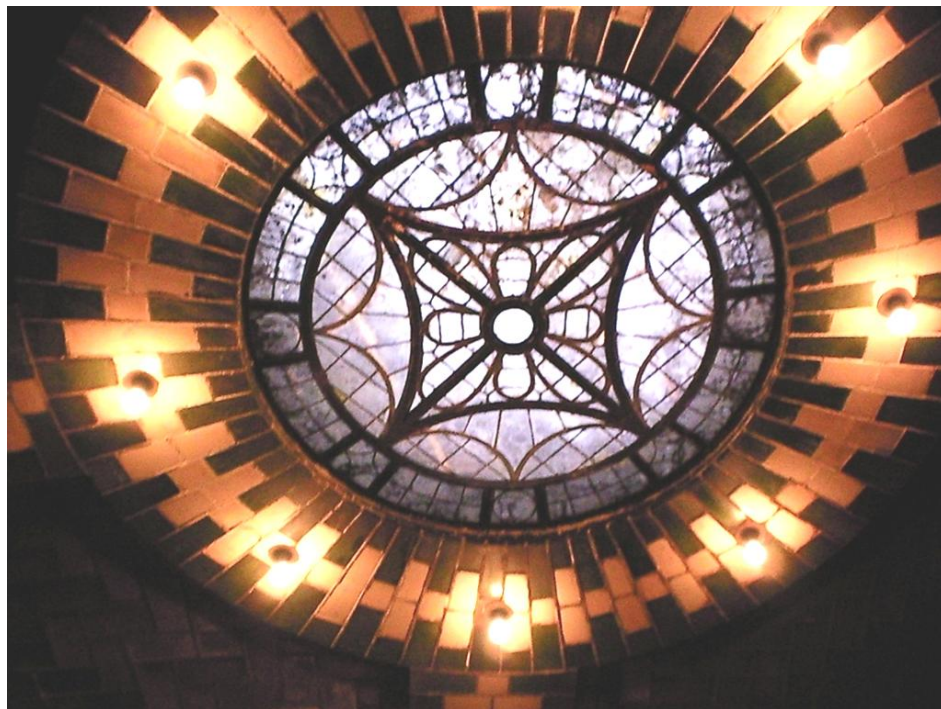


Figure 34: Mezzanine oculus at the City Hall station. The black smudges on the leaded glass are not just dirt, but remnants of black out paint from World War II. Photo by author.



Figure 35: Barrel vault over stairs to the platform from the mezzanine level, City Hall station. Photo by author.



Figure 36: Bronze plaques commemorating the opening of the subway at the flagship station. Photo by author.



Figure 37: Long view of the City Hall platform., looking north. Photo by author.



Figure 38: Skylights set into vaults at platform level. Photo by author.

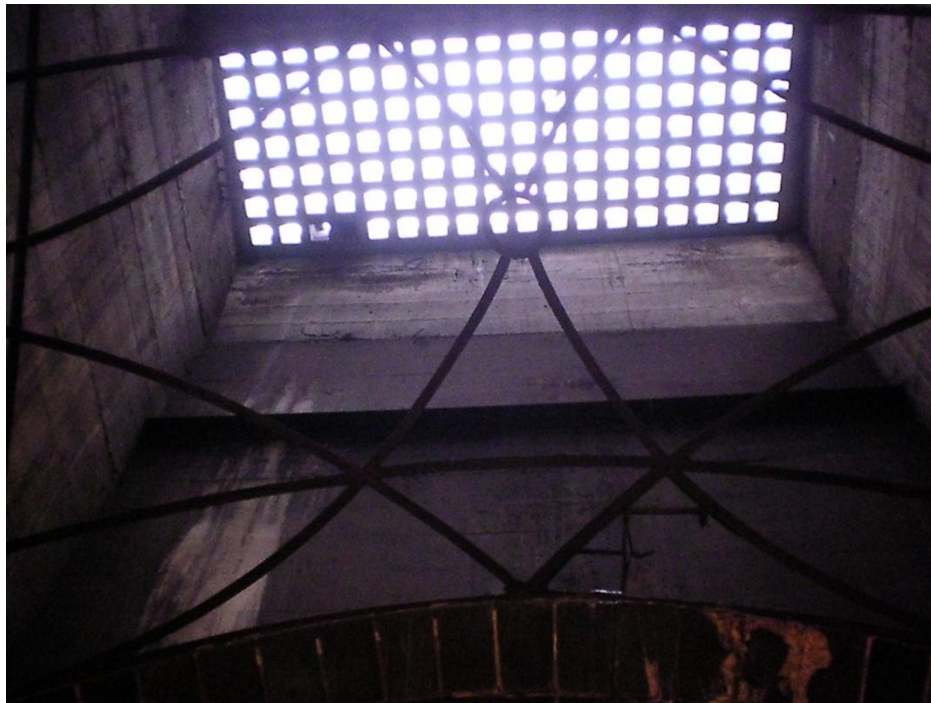


Figure 39: Broken skylight, City Hall station. Photo by author.



Figure 40: Sample brass chandelier from the City Hall station. Originally, these had glass sconces which were lost early on to vibration from the trains. Photo by author.

underground station in Brooklyn as its home space. But due to safety hazards, such as the live electric third rail needed to power the 6 trains using the loop as a turn around and the steep curve of the platform, as well as noise concerns, the project ran into difficulties. At the time, the Transit Museum could not come up with a creative solution to solve the safety and noise problems in the station without completely altering its beauty and historic character, which was the reason behind wanting to reopen the station to the public. During this time the Transit Museum was conducting tours of the station as part of its early subway interpretation program. The tours and the plans to annex the station as part of the Museum were completely stopped in 1998 when the Giuliani administration declared the station a “highly secure area” after the terrorist bombings in Nairobi. The station went unused for another six years.¹⁶⁴

For the subway’s Centennial Celebration in 2004, organizers wanted to reenact the first subway ride from 1904, which meant starting at the City Hall station. In preparation for the event, the city reopened one of the station’s entrances and replicated the original metal hood over the stairs at street level. The entire station was pressure washed to remove the years of accumulated steel dust coating all of the surfaces and the black-out paint was meticulously scrapped from the leaded glass skylights.¹⁶⁵ It was in no way a restoration or rehabilitation effort, and the historic materials should not have come under the stress of a power washer. After sitting vacant for so long, however, any attention given to the cleanup of the station was a step in the right direction.

In 2006, station tours given by the Transit Museum were permitted again. Not being directly under City Hall and remaining off limits to most of the public, the

¹⁶⁴ Bobby Cuza, “See a Glimpse of NYC History for the Price of a Subway Ride,” *NY 1*, March 6, 2007, http://www.ny1.com/1-all-boroughs-news-content/top_stories/?SecID=1000&ArID=67432 (accessed April 19, 2010).

¹⁶⁵ Joe Cunningham (Transit Historian and Transit Museum Tour Guide), discussion with author, December 6, 2009.

station was considered less of a threat to security under the Bloomberg administration. Mindful of security threats, the Transit Museum changed its policy as to who was allowed to tour the station, restricting access to Museum members only who made a reservation and paid in advance. Since NYCTA now requires passengers to exit the number 6 train before it is turned around in the City Hall Loop, participants in the Transit Museum tours are the only people who see the station today.

It is a shame that the crown jewel of the subway system is slowly rotting away underground. Because of its closed status, many preservationists do not consider the issues facing this station, and the station more often than not goes under the radar. Water infiltration and damage is a problem with this station, as seen by the deterioration and spalling and cracking of the tile and terracotta ornamentation (Figure 41). Also disconcerting is the way that open-ended pipes have been jammed through the western wall of the mezzanine level, destroying historic fabric and compromising the tiles around the pipes (Figures 42 and 43). According to a Transit Museum tour guide, the number of pipes has slowly increased over the years without much explanation as to their need,¹⁶⁶ suggesting that their installation has not followed the Section 106 process required by law.

This station is surviving through preservation-by-neglect, but it is only a matter of time until neglect has run its course and this flagship station will have crumbled away. If it does, New York City will have lost another architectural gem for history to lament. In the mean time, preservationists need to quit writing off this station because of its closed status because even though it is closed, it is still designated as an historic property. Abandoned historic buildings aboveground still receive preservation attention and the City Hall station should be no different. Hopefully, the Transit Museum or another organization will devise a creative plan to reopen and maintain the

¹⁶⁶ Cunningham, discussion.



Figure 41: Water damaged tile from platform level vault rib.
Photo by author.



Figure 42: Open-ended pipes cut through the west wall on the mezzanine level, circa 2009. Photo by author.



Figure 43: HAER photograph from 1978 depicting the same wall on the mezzanine level without pipes. From the Library of Congress.

space.

Preservation within NYCTA has come a long way since the 1980s, but there are still crucial elements that need to be put in place as demonstrated by the case studies. Even though the restoration of the Wall Street station is an exemplary model for future station restorations, the case highlighted the need to continue to educate the different departments within MTA about preservation and good preservation practice. The Courthouse Square case illustrates that even though preservation has become to be integrated into daily planning routines, it is secondary to larger agendas. It also unfortunately confirms that preservation will continue to be a struggle in the outer boroughs and the need for subway preservation advocacy. The need for advocacy is reinforced by the City Hall case in addition to the need to treat all of the stations with greater appreciation.

CONCLUSION

Preservation projects are never easy, especially when dealing with the size and scale of the New York City subway system. The transit system is so integrated into the city's past that its very historic legacy creates a challenging preservation environment. Yet the city, through the auspices of the LPC and the NYCTA, have recognized the value of the historic system and have taken small steps to insure its survival for future generations. The preservation ordinances at the local and national levels have worked well to protect the stations under these designations where they have been applied. The preservation ordinances have helped deter bad practice in station rehabilitations, and raised awareness at NYCTA for the resources in their stewardship. These ordinances have, in turn, triggered a change in attitude at NYCTA towards maintaining its historic properties, which has influenced agency policy to be more sensitive to preservation issues and encouraged the agency to add a preservation specialist to its staff.

Some have questioned whether the preservation ordinances make sense in the subway stations; whether the average person can truly distinguish the old from the new in designated stations, since new designs have to be in keeping with the historic character of the space but not mistaken for original historic fabric. Without the regulations and review, and holding the stations and NYCTA accountable, the historic character of the system would be jeopardized. The unique character of the historic stations does not make it simple for NYCTA to rehabilitate and standardize the system across the board. It is easy to imagine that without the standards of the ordinances that concessions would be made and more historic fabric would be lost. The small staff at

NYCTA dedicated to preservation welcomes the challenge of the ordinances, and finding creative solutions for the preservation of the system.¹⁶⁷

These have been large strides in preservation thinking for NYCTA to accomplish, but for the system to be successfully maintained for the future, more steps need to be taken. NYCTA preservation policies and guidelines, such as the Design Guidelines, need to be continually reviewed and revised to provide the most effective measures, in terms of time, cost, and success, which NYCTA can follow. The LPC needs to reevaluate all of the stations that have turned 50 years old since the first round of station designations to add more stations to the local landmarks list and the protected status it provides. The local ordinance for the stations needs to be viewed as the first line of defense for preservation, instead of relying so heavily on the SHPO and Section 106 review. Furthermore, a periodic review of the system should be set in place to nominate stations to the National Register as the subway ages. Station redesigns, such as the Bowling Green station by Phillip Johnson, will become historic on their own and deserve evaluation.

Today, LPC is swamped with applications regarding landmarked buildings and historic districts, meaning that they rely heavily on preservation advocates to bring potentially historic properties to the Commission's attention. This brings up another point: Where is the advocacy for these stations? There are many subway-enthusiasts in the city, particularly those who have helped NYCTA project coordinator Hollie Wells preserve historic materials in the early days of preservation at NYCTA. There is also a website hosting New York City subway history and trivia, nycsubway.org, but it is more of an informational site than a nonprofit advocate. Active community groups were responsible for many of the station rehabilitations of the 1970s and

¹⁶⁷ Hollie Wells, Sara McIvor, Judith Kunoff, interview.

1980s,¹⁶⁸ but there is a lack of record for community involvement in preservation projects that one could point to today.

Part of the reason that there has not been a high level of advocacy seen for the subway stations is the way in which the designations were cast. Instead of being true interior designations they ended up being partial designations, which focused only on the decorative architectural elements. This effectively alienated natural advocacy groups, such as train enthusiasts or engineers who have worked on the subways, since they did not have any connection to the designations. A solution would be to reconsider the designations and expand them to be true interior designations. This would be problematic since it would compromise NYCTA's total control over the system operations.

More interpretation and outreach would also raise the designated stations' profiles among the public. One of the best, and perhaps only, preservation-related features of the Bowling Green station redesign was the hanging of historic subway photographs in the new setting. This gave the passengers waiting for the train a chance to really look at the past, as compared to the present, in station design and acted as an interpretative program for the station. Other outreach materials, possibly in coordination with Arts for Transit, are needed and would help highlight the history of the system.

Funding has long been a problem for the subway system and it is not an issue with an easy fix. Lack of funds reduce the scope of preservation projects and undermine station rehabilitations by not providing adequate maintenance once the project is complete. This problem is especially difficult in the current economic situation in addition to the fact that MTA relies heavily on New York State money and the state is nearly bankrupt. There are a few small steps that could help alleviate some

¹⁶⁸ Taylor, 76.

of the financial burden associated with preservation. Hiring a preservation consultant with expertise in building materials for each project that might deal with historic stations may seem expensive upfront, but money will be saved when historic fabric is dealt with correctly the first time instead of having to mitigate costly mistakes.

Purchasing replacement material in bulk is another way MTA could save money. A 2002 Inspector General audit report of MTA's in-house construction workforce suggested that MTA use its ability to buy certain building materials in bulk and then supplying the material to private contractors may be one way to save money.¹⁶⁹ Heavily used materials, such as the floor tiles or the ubiquitous white ceramic wall tile, would benefit from ordering in bulk.

Another suggestion would be to strike an agreement between NYCTA and the Arts for Transit program, overseen by MTA, to put the 1% project costs Arts budget towards restoring the art already incorporated in historic stations. This could employ community-based conservators, in keeping with the community-friendly program, to restore the mosaics, faience, and plasterwork that once adorned the stations instead of introducing modern art to the historic environment.

Finally, preservation needs to become a standard mindset across the board at MTA. The preservation officer, agency architect, and project coordinator cannot execute their job alone amid the hundreds of MTA employees. Good internal programs, such as Arts for Transit, need to reevaluate how they can contribute to the stewardship of the resources. Education on historic preservation, especially among head administrators, cannot be stressed enough. By continuing to work at being better stewards of their resources, MTA will give preservation in the subways a brighter future.

¹⁶⁹ Office of the Inspector General, "Using New York City Transit's Workforce to Rehabilitate Subway Stations," (New York State: March 2002). iii.

APPENDIX A
CURRENT TREATMENTS FOR THE 181ST STATION

The preservation treatment of the 181st Street station in dealing with the ceiling collapse is an on-going story. The first document received by the NY SHPO about the incident was a copy of the letter sent to the Transit Chair, the Honorable Doreen Rasca. The letter details the history of the station, the collapse, and the next steps that need to be taken for review. A large metal sheet covering the platforms and tracks has been installed to protect passengers from further collapse. Each brick in the ceiling since the collapse has been tested for soundness. As an added safety precaution, 181st Street's sister station in the Fort George Tunnel at 168th street has had its brick-faced vaulted ceiling tested as well.¹⁷⁰

In September 2009, MTA commissioned an interim report looking at the structural conditions of the station and probable causes for the ceiling failure. The report by Di Domenico + Partners, in association with a structural engineering firm, discovered that, "long-term exposure to water in the brick arch construction is among the primary agents of the partial failure of the face brick. However, the mechanism of how this process affected the structure is not yet totally clear."¹⁷¹ The firm sites the water as ground source, as opposed to potable or sewage water, and that historic photographs suggest that the seepage as gone on for many years.¹⁷²

The collapse in August 2009 was most likely triggered by a loss of arch geometry due to the loss of brick, which has been falling since 1999. The main areas affected by water damage include the intersections of the original and new elevator

¹⁷⁰ "168th Street/ 181st Street Stations," (Docket 09PR06040: New York SHPO).

¹⁷¹ Di Domenico + Partners and Robert Silman Associats, "Interim Report: 181st Street Subway Station," Delivered to MTA. September 18, 2009. (Docket 09PR06040: New York SHPO). 2.

¹⁷² Ibid.

shafts as well as the groin vaults. Tests showed that the face brick is not as damaged as originally thought, but there are signs of water laying between the layers of brick in the arches.¹⁷³ The next step for MTA in solving the problem is to conduct further tests, including taking core samples. MTA is currently consulting with the SHPO to find an appropriate location to take the core samples from to do the least damage to the intact historic fabric.¹⁷⁴

In the meantime, MTA has shored up the terracotta decorative elements in the vicinity of the collapse using plywood (Figure 44). By working with the SHPO from the beginning of the collapse, MTA insures that whatever solution is ultimately put forward for both 181st Street and 168th Street will be sensitive to these stations' historic character.



Figure 44: Cribbing supporting terracotta ornamentation while tests are performed on the 181st Street station. Photo from New York SHPO file.

¹⁷³ Ibid, 3.

¹⁷⁴ Ibid.

APPENDIX B

LIST OF INDIVIDUALLY DESIGNATED STATIONS, LOCAL AND NATIONAL

Designated Landmarks and Individually listed State and National Registers properties

1. Borough Hall Station, Brooklyn (IRT Lexington Ave.)
2. City Hall Station, (IRT Lexington Ave.)
3. Wall Street Station (IRT Lexington Ave.)
4. Fulton Street Station (IRT Lexington Ave.) ***Note: Fulton Street is SR/NR-eligible only; still requires SHPO review.**
5. Bleecker Street Station (IRT Lexington Ave.)
6. Astor Place Station (IRT Lexington Ave.)
7. 33rd Street Station (IRT Lexington Ave.)
8. 59th St./Columbus Circle Station (IRT Seventh Ave.)
9. 72nd Street Control House and Station (IRT Seventh Ave.)
10. 79th Street Station (IRT Seventh Ave.)
11. 110th Street Station (IRT Seventh Ave.)
12. 116th Street Station-Columbia University (IRT Seventh Ave.)

Individually listed State and National Registers properties

13. Woodlawn Road Station, Bronx
14. Beverley Road Station, Brooklyn (Brighton)
15. Mosholu Parkway Station, Bronx . ***Note: Mosholu Parkway Station is SR/NR-eligible only; still requires SHPO review**
16. Times Square Station/42nd Street, Manhattan
17. 168th Street Station, Manhattan (Bway /7)

18. 181st Street Station, Manhattan (Bway /7)
19. 28th Street Station, Manhattan (Lexington Avenue)
20. Brooklyn Bridge Station, Manhattan (Lexington Avenue)
21. Atlantic Avenue Station, Brooklyn (Eastern Parkway)
22. 145th Street Station, Manhattan (Lenox Avenue)
23. 242nd Street Station, Bronx (Bway/7)
24. Prospect Avenue Station, Bronx (White Plains Road)
25. Simpson Street Station & Substation #18, Bronx (White Plains Road)
26. Dyckman Street Station and Fort George Tunnel Portal, Manhattan (Bway/7)
27. Jackson Avenue Station, Bronx (White Plains Road)
28. Chambers Street Station, (Nassau), Manhattan (Broadway/ BMT)
29. Main Street Station, Queens (Flushing)
30. Chambers Street Station, Manhattan(Broadway/Seventh Avenue)
31. 14th Street-Union Square Station, Manhattan (Bway/BMT/IRT/Canarsie)
32. West 28th Street Station, Manhattan (Bway /7)
33. 86th Street Station, Manhattan (Lexington Avenue)
34. Pelham Parkway Station, Bronx (White Plains Road)
35. 45th Road-Courthouse Square Station, Queens (Flushing)
36. Ocean Parkway Station, Brooklyn (Brighton)
37. Westchester Square Station, Bronx (Pelham)
38. New Utrecht Avenue Station, Brooklyn (Sea Beach)
39. Avenue U Station, Brooklyn (Sea Beach)
40. Wilson Avenue Station, Brooklyn (Canarsie)
41. 9th Avenue Station, Brooklyn (West End)
42. 15th Street-Prospect Park Station, Brooklyn (Sixth Avenue/Prospect)
43. 4th Avenue Station, Brooklyn (Sixth Avenue/Propsect)

- 44. West 4th Street Station, Manhattan (Sixth /Eighth Avenue)
- 45. 181st Street Station, Manhattan (Eighth Avenue)
- 46. 190th Street Station, Manhattan (Eighth Avenue)
- 47. Elmhurst Avenue Station, Queens (Queens Blvd.)
- 48. Morris Park Station, Bronx, IRT (Dyre Avenue)
- 49. Bay Parkway Station, Brooklyn, BMT (West End)
- 50. Grand Central Station (IRT) (part of Grand Central Terminal)**

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